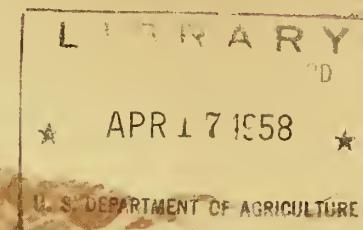


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Do not assume content reflects current scientific knowledge, policies, or practices.



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31 Feb



FEDERAL - STATE - PRIVATE COOPERATIVE  
SNOW SURVEY and WATER SUPPLY FORECASTS  
for  
OREGON

UNITED STATES DEPARTMENT of AGRICULTURE  
SOIL CONSERVATION SERVICE  
and  
OREGON AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above  
in cooperation with other Federal, State and private organizations.

AS OF  
APR. 1, 1958

# UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

## TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Fortunately, most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from fore-knowledge of the runoff.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, about 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1300 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

By relating snow survey measurements taken over a period of years to spring-summer runoff during the same period, relationships have been developed which make it possible to forecast seasonal runoff several months in advance of occurrence. In order to make a forecast, once a forecast relationship has been developed, the maximum snow water content at previously selected key snow courses is usually entered in the forecast relationship. More accurate forecasts are often obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast relationships.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions.

## PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	COOPERATING WITH	LOCATION
<b>RIVER BASINS</b>			
COLORADO, RIO GRANDE AND PLATTE-ARKANSAS	MONTHLY (FEB.-MAY)	COLO. EXP. STATION	FT. COLLINS, COLO.
COLUMBIA <i>Includes Alaska</i>	MONTHLY (JAN.-MAY)		BOISE, IDAHO
UPPER MISSOURI	MONTHLY (FEB.-MAY)	MONT. AGR. EXP. STATION	BOZEMAN, MONTANA
WEST-WIDE	SEMI-ANNUALLY (OCT. 1 AND APR. 1)	COOPERATORS	PORTLAND, OREGON

## STATES

ARIZONA	SEMI-MONTHLY (JAN. 15-APR. 1)	SALT R. VALLEY WATER USERS ASSOCIATION	PHOENIX, ARIZONA
NEVADA	MONTHLY (FEB.-APR.)	NEVADA STATE ENGINEER	RENO, NEVADA
OREGON	MONTHLY (JAN.-MAY)	ORE. AGR. EXP. STATION	PORTLAND, OREGON
UTAH	MONTHLY (JAN.-MAY)	UTAH STATE ENGINEER UTAH AGR. EXP. STATION	SALT LAKE CITY, UTAH
WASHINGTON	MONTHLY (FEB.-MAY)	WASH. STATE DEPT. OF CONSERVATION AND DEVELOPMENT	SPOKANE, WASHINGTON
WYOMING	MONTHLY (FEB.-JUNE)	WYOMING STATE ENGINEER	CASPER, WYOMING

Copies of the various reports may be secured from: Head, Water Supply Forecasting Section  
Soil Conservation Service  
209 S.W. 5th Avenue, Portland 4, Oregon

## PUBLISHED BY OTHER AGENCIES

### OTHER SNOW SURVEY REPORTS

BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	COMPTROLLER, WATER RIGHTS BR., DEPT. OF LANOS AND FORESTS, PARLIAMENT BLOCS, VICTORIA, B.C.
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIFORNIA DEPARTMENT OF WATER RESOURCES, SACRAMENTO, CALIFORNIA

FEDERAL - STATE - PRIVATE COOPERATIVE  
SNOW SURVEY and WATER SUPPLY FORECASTS  
for  
OREGON

ISSUED

APRIL 8, 1958

*Report prepared by*  
W. T. FROST, Snow Survey Supervisor  
*and*  
MANES BARTON, Assistant Snow Survey Supervisor  
SOIL CONSERVATION SERVICE  
209 S.W. 5TH AVE. PORTLAND 4, OREGON

*Issued by*

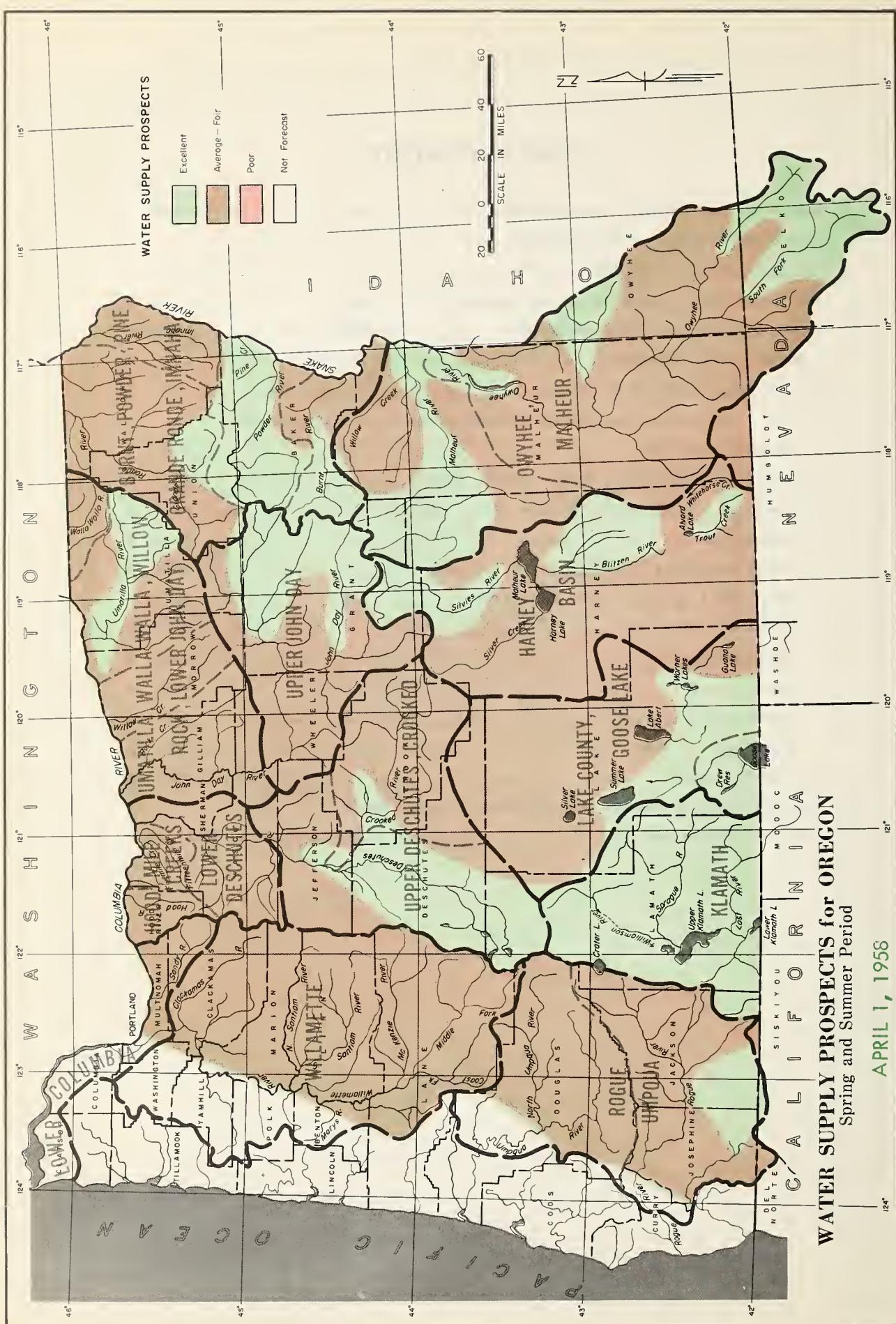
THOMAS P. HELSETH  
STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE

F. EARL PRICE  
DIRECTOR  
OREGON AGRICULTURAL  
EXPERIMENT STATION



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# WATER SUPPLY OUTLOOK for OREGON

APRIL 1, 1958

Oregon farmers will have average to excellent water supplies for irrigation this year. In spite of an unusually warm and rainy winter, the high-mountain snow is well above average and reservoird water supplies are excellent.

## SNOW-COVER:

State-wide water content of the mountain snow-pack is 114 percent of average compared with only 83 percent of average last year at this date. Snow-cover averages somewhat below normal (92 percent) in the northwestern corner of the state but increases to average and on up to 141 percent in the southeast corner. Low elevation snow is conspicuously missing this year.

## SOIL-MOISTURE:

Watershed soils under the snow-pack are well wetted throughout the state. This condition favors a satisfactory runoff from snow-melt.

## RESERVOIR STORAGE:

Reservoird water supplies in 23 larger reservoirs are 129 percent of average and 81 percent of capacity. Smaller reservoirs and stock ponds throughout the state are full or can be filled.

## PRECIPITATION:

Precipitation<sup>1</sup> at 13 selected valley stations during March was 75 percent of average. For the October-March period it was 117 percent of average.

## STREAMFLOW:

Streamflow forecasts for the irrigation season indicate normal to much above normal flows can be expected. These forecasts vary from a low of 90 percent in the Clackamas to a high of 164 percent on the Owyhee in southeastern Oregon .

Discharge of many small streams that flow out of low-elevation watersheds is expected to fall off earlier than usual because of the lack of low-elevation snow. Good summer rains can improve this situation.

March discharge<sup>2</sup> of key Oregon streams was about 70 percent of average except for Upper Klamath Lake, which had an inflow 210 percent of average. Runoff October through March has been highest (190 percent) on Upper Klamath Lake and lowest (112 percent) on the Deschutes and Hood Rivers.

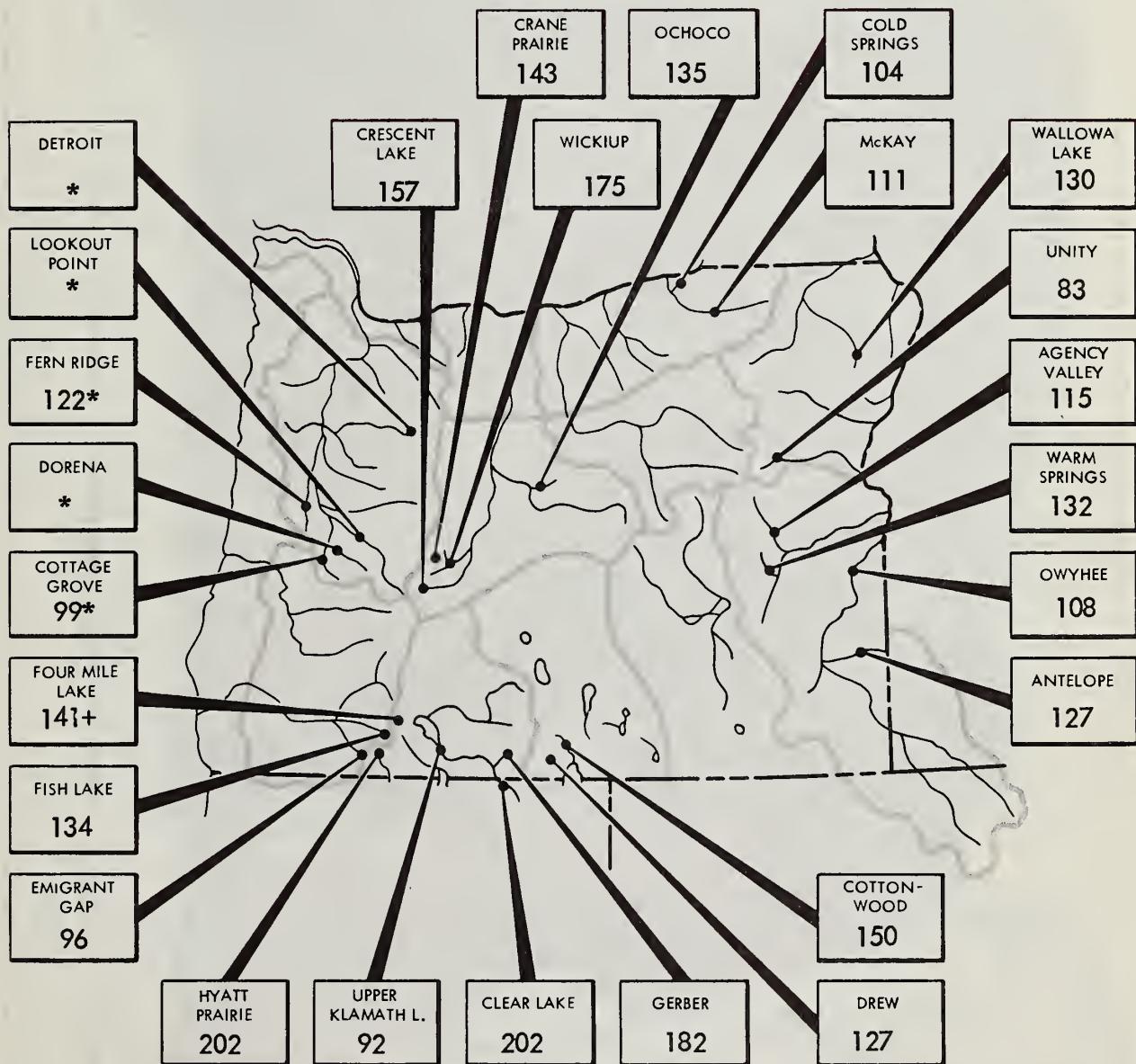
<sup>1</sup>From preliminary data furnished by U.S. Weather Bureau, Portland, Oregon.

<sup>2</sup>From preliminary data furnished by U.S. Geological Survey, Portland, Oregon.

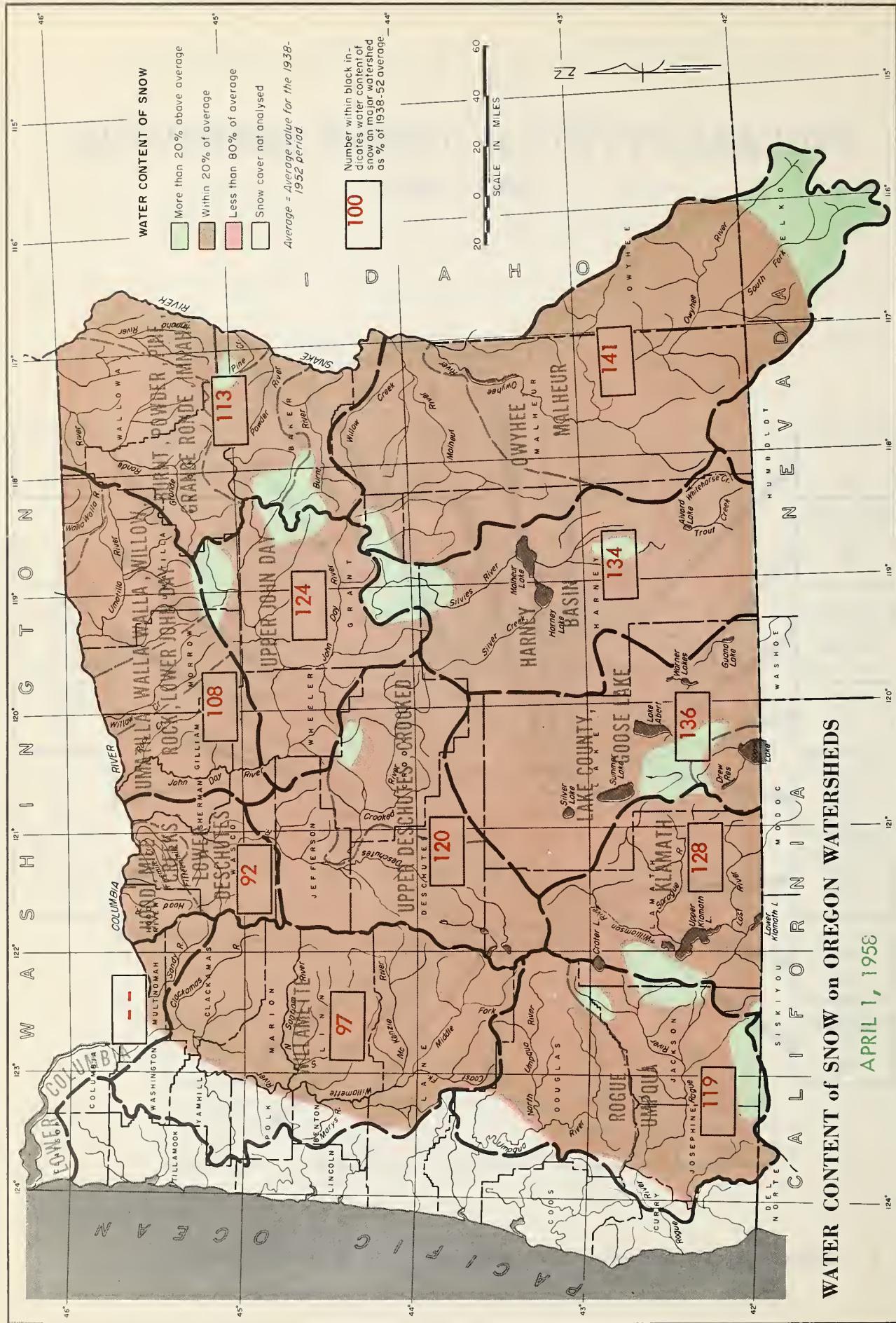


# STORAGE STATUS of OREGON RESERVOIRS

APRIL 1, 1958

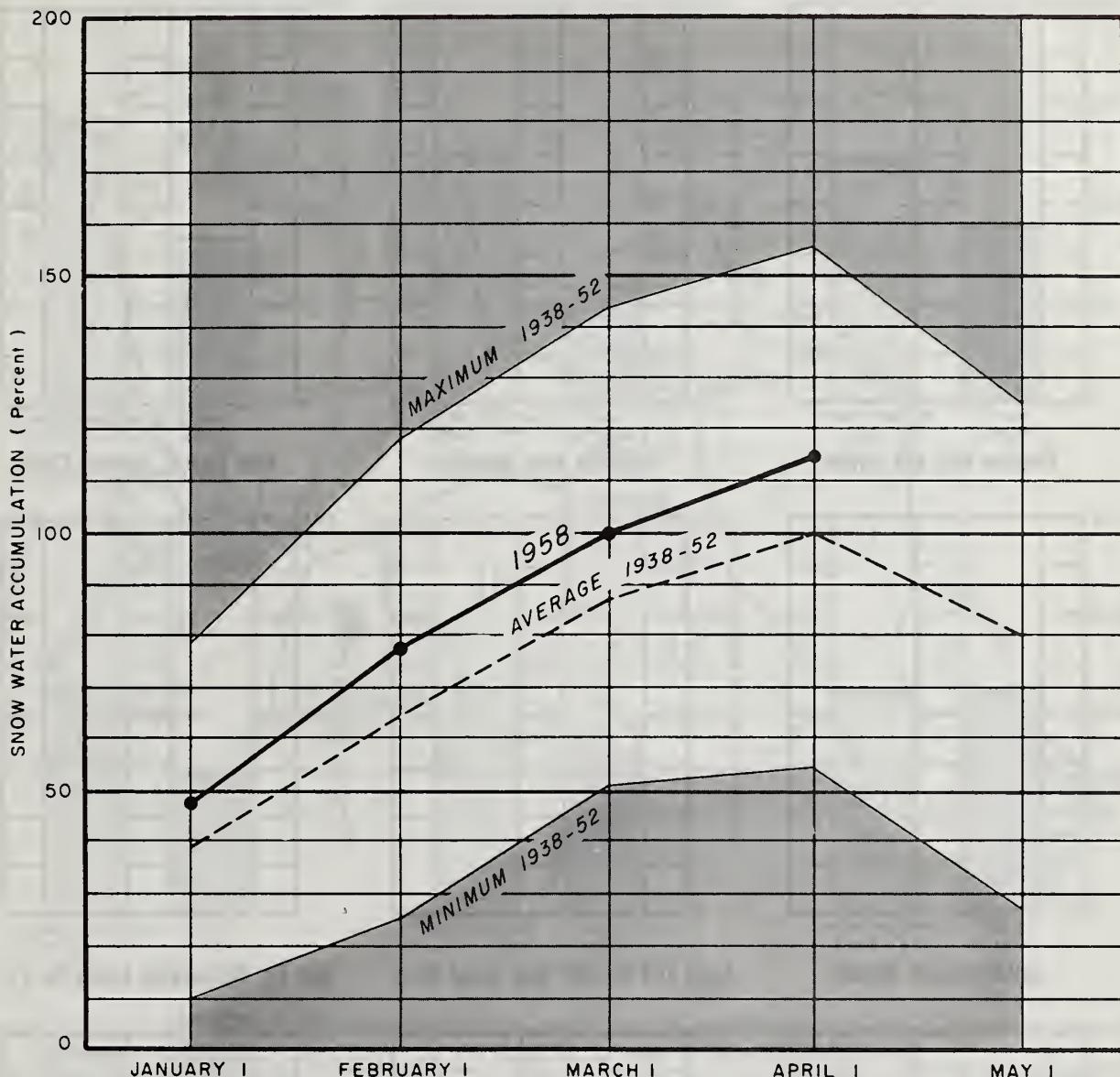


\* - Multiple purpose reservoir - space reserved primarily for flood runoff.



## SNOW WATER ACCUMULATION in OREGON

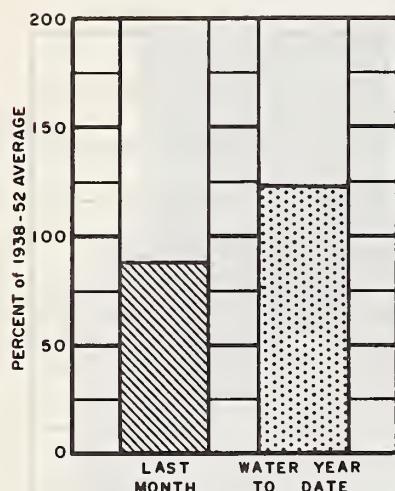
APRIL 1, 1958



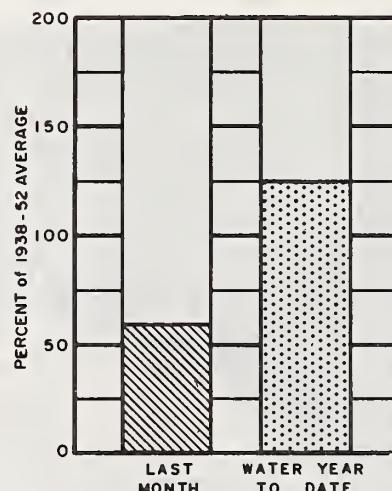
The accumulation of snow water was normal again this month. There now is 13 percent more snow water than is usual.

## CURRENT OREGON STREAMFLOW

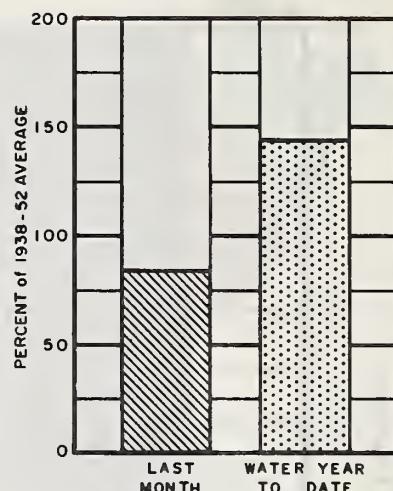
APRIL 1, 1958



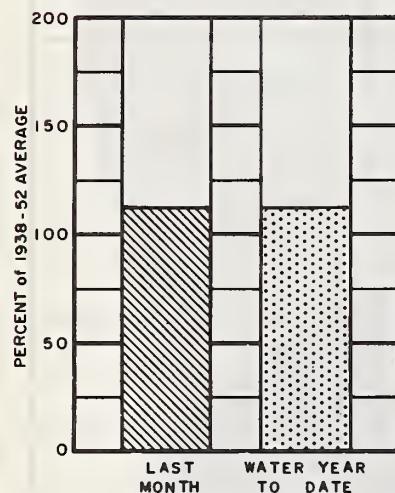
Owyhee Res. net inflow



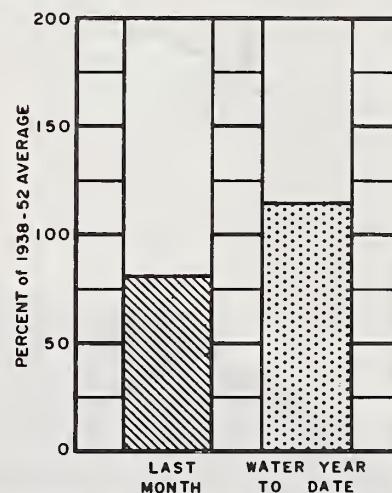
Umatilla near Umatilla



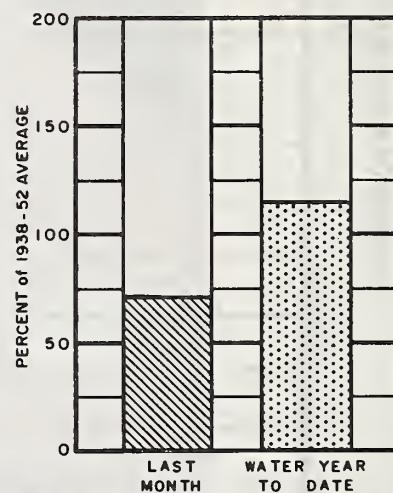
John Day at Service Creek



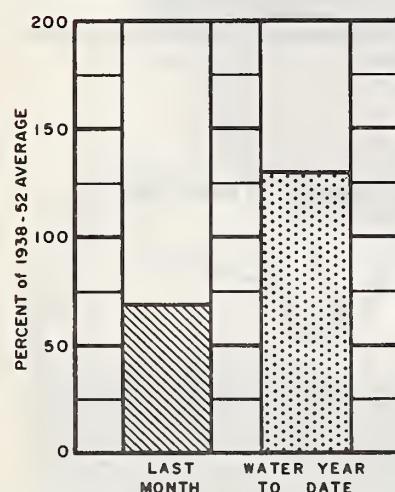
Deschutes at Moody



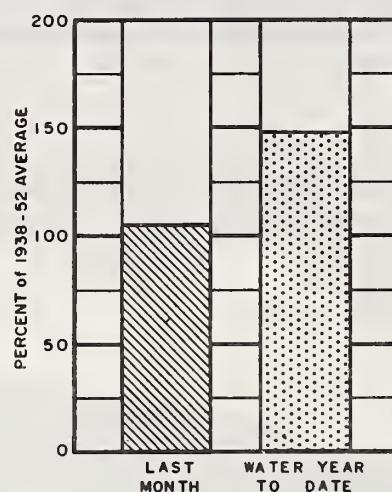
Hood and conduit near Hood River



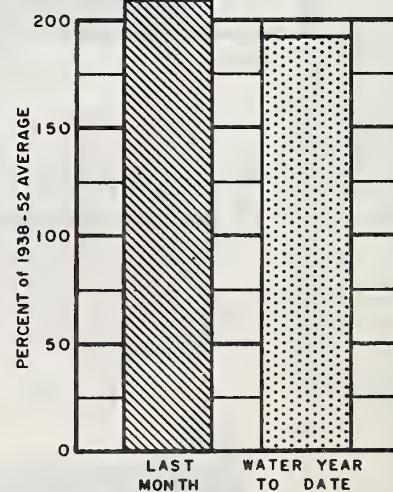
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



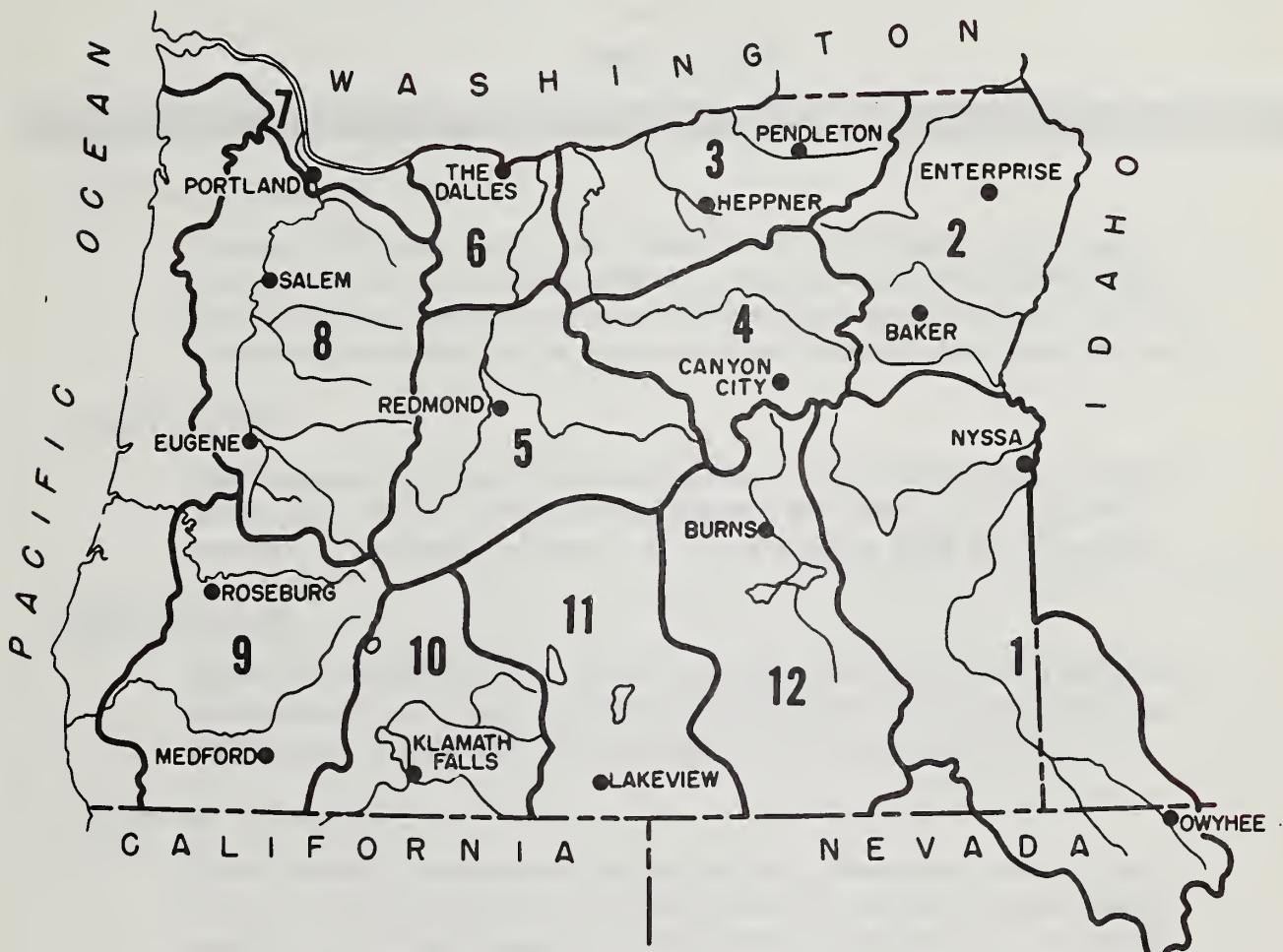
Rogue at Raygold



Upper Klamath Lake net inflow

# VALLEY PRECIPITATION in OREGON<sup>a</sup>

APRIL 1, 1958



PRECIPITATION as PERCENT of the 1938-52 AVERAGE

STATION	LAST MONTH	WATER YEAR TO DATE <sup>b</sup>	STATION	LAST MONTH	WATER YEAR TO DATE <sup>b</sup>
Baker Apt.	80	206	Owyhee (Nev.)	c	
Burns	103	124	Pendleton Apt.	129	124
Canyon City	Station	closed	Portland Apt.	57	83
Enterprise	c		Redmond Apt.*	98	103
Eugene Apt.	56	128	Roseburg Apt.	69	127
Heppner	c		Salem Apt.	57	100
Klamath Falls Apt.	77	156	The Dalles	58	113
Lakeview	100	117			
Medford Apt.	106	128			
Nyssa	166	133			

<sup>a</sup>Preliminary data furnished by the U.S. Weather Bureau. <sup>b</sup>Oct. 1 to date. <sup>c</sup>Report delayed.

\*As percent of Redmond average.

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# WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

*as of*

APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

## GENERAL OUTLOOK

Farmers in Malheur County can expect much above normal water supplies for lands served by the larger streams. Most of the smaller streams that flow from low-elevation watersheds have already made their early run and late season shortages can be expected unless adequate June rains are received.

## SNOW-COVER

The increase in the snow-pack during March was unusually heavy at high elevations. Water content of the mountain snow-pack is 141 percent of average. Practically no snow is to be found below 4800 feet elevation.

## SOIL-MOISTURE

Moisture penetration in the soils of the upper watershed areas is excellent. Measurements were made two weeks ago by means of electronic sampling devices and by driving a soil sampling tube into the soil profile.

## RESERVOIR STORAGE

Water stored in four large irrigation reservoirs, Antelope, Warm Springs, Agency Valley and Owyhee, is 113 percent of average. Water is being spilled at all three reservoirs to make room for later inflow. No report for Malheur Lake (Willow Creek No. 3) has been received. Small reservoirs and stock ponds are reported to be full.

## STREAMFLOW

Flow of the Malheur is forecast at 137 percent of average for the April-September period. During the same period the Owyhee Reservoir is expected to receive a flow of 164 percent of average. Jordan Creek should have much above average discharge. Late season flow of Bully Creek, Cottonwood Creek (south of Harper), and other small tributaries of the Malheur will fall off early.

*Report prepared by*

W T Frost and Manes Barton  
U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

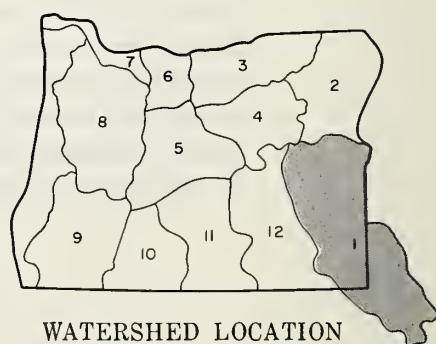
STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Boulder Creek	Excellent	Average	
Bully Creek	Average	Fair	
Caw Creek	Excellent	Average	
Jardan Creek	Excellent	Average	
Jardan Valley I.D.	Excellent	Average	
McDermitt Creek	Excellent	Average	
Oregon Canyon Creek	Excellent	Average	
Owyhee Project	Excellent	Average	
Sucker Creek	Average	Average	
Ten Mile Creek	Average	Average	
Vale, Oregon I.D.	Excellent	Average	
Warm Springs I.D.	Excellent	Average	
Willow Creek	Average	Average	

## STREAMFLOW FORECASTS<sup>c</sup> (1,000 Ac. Ft.)

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	THIS YEAR AS PERCENT OF NORMAL <sup>b</sup>	
				NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL
1320	Malheur near Drewsey	112	April-Sept.	82	137
139	Malheur North Fork at Beulah <sup>e</sup>	87	April-Sept.	64	136
1234	Owyhee Reservoir net Inflow <sup>g</sup>	750 725 d	April-Sept. April-July March-July	458 440 570	164 165

## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL <sup>b</sup>
Agency Valley	60.0	57.2	58.7	49.8
Antelope	36.5	23.3	N.R.	18.4
Owyhee	715.0	637.4	696.6	590.3
Warm Springs	191.0	159.7	193.0	121.1



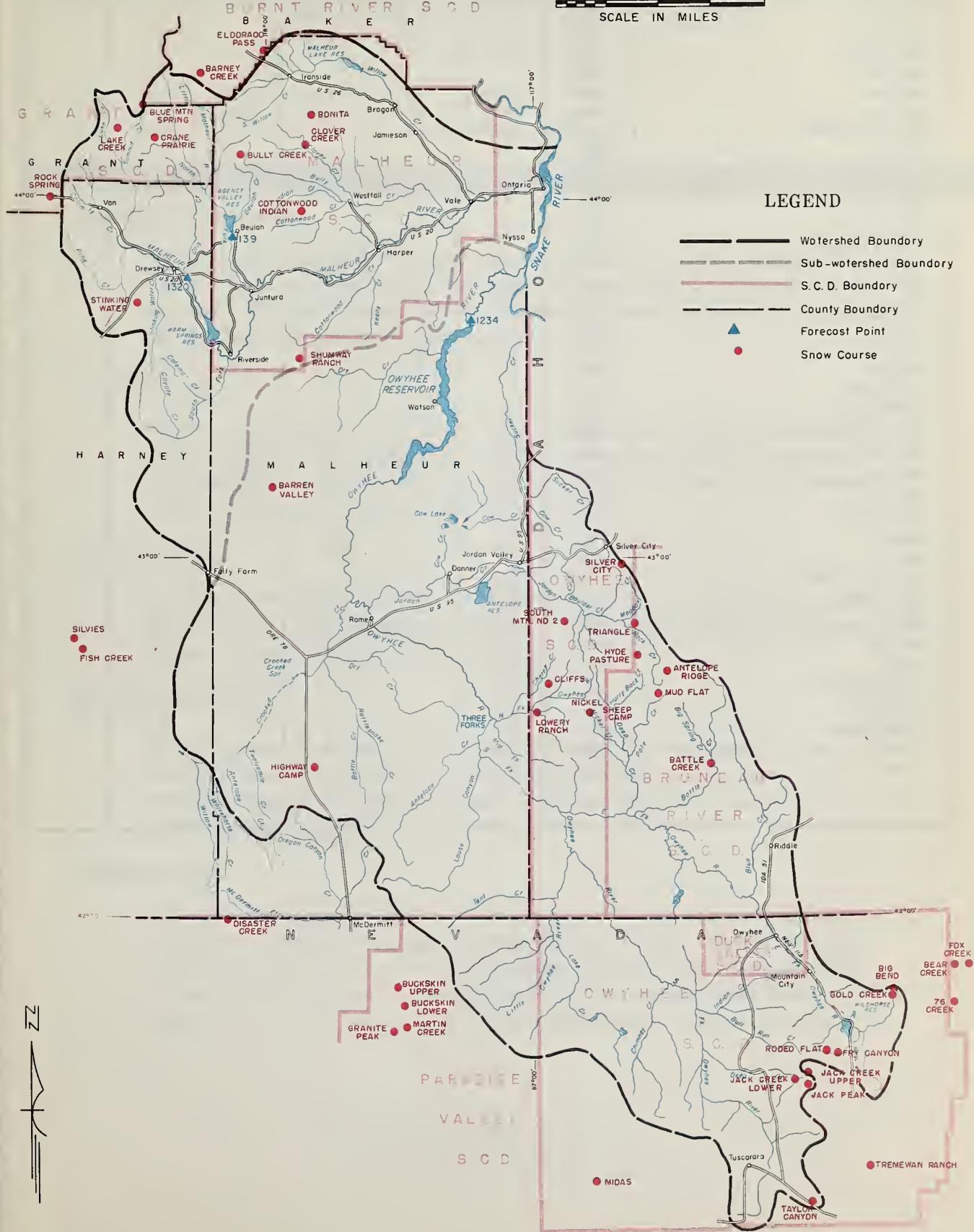
<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated. <sup>g</sup> From USBR records of inflow.

h Report delayed.

## OWYHEE, MALHEUR WATERSHEDS

A horizontal scale bar with tick marks at 0, 10, 20, and 30 miles. The word "SCALE" is written above the 0 mark, and "IN MILES" is written below the 30 mark.



# Owyhee, Malheur Watersheds

## SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		YEARS OF <sup>c</sup> RECORD
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	
Antelope Ridge	5500	h					
Borney Creek	5950	4-1	38	10.0	7.3	9.4	8
Barren Valley	4200	h					
Bottle Creek <sup>f</sup>	5700	h					
Bear Creek	7800	3-27	68	23.4	23.3	22.1	10
Big Bend	6700	3-31	42	15.2	9.3	10.3	15
Blue Mountain Springs	5900	3-25	59	21.2	16.2	15.8	15
Bonito	4600	h					
Buckskin, Lower	6700	h					
Buckskin, Upper	7200	h					
Bulky Creek <sup>f</sup>	5300	h					
Cliffs	5200	h					
Claver Creek	4100	3-27	0	0.0	--	--	0
Cottonwood - Indian <sup>f</sup>	4320	h					
Crone Prairie	5375	3-25	38	13.6	6.8	8.8	15
Disaster Peak	6500	3-31	36	18.3	9.6	--	4
Eldorado Pass	4600	3-27	0	0.0	0.0	--	0
Fish Creek	7900	h					
Fax Creek	6800	3-27	33	12.3	8.0	8.8	13
Fry Canyon	6700	3-31	40	14.9	6.8	10.2	12
Gold Creek	6600	3-31	28	10.5	5.9	7.0	12
Granite Peak	7800	h					
Highway Camp <sup>f</sup>	4300	h					
Hyde Pasture <sup>f</sup>	5800	h					
Jack Creek, Lower	6800	4-1	23	9.3	3.5	2.7	15
Jack Creek, Upper	7250	4-1	48	19.3	14.0	11.4	12
Jack Peak	8420	4-1	108	41.3	31.5	--	0
Lake Creek	5120	3-26	41	15.3	11.2	10.1	15
Lowry Ranch	4800	h					
Martin Creek	7200	h					
Midos	5700	3-28	22	8.4	T	2.1	11
Mud Flat	5500	h					
Nickel Sheep Camp <sup>f</sup>	5450	h					
Rack Springs	5100	3-24	24	9.0	4.3	4.7	15
Radea Flat	6800	3-31	45	16.8	8.7	10.9	12
Shumway Ranch	4400	3-27	0	0.0	0.0	--	0
Silver City	6400	3-30	48	17.6	18.1	15.0	8
Silvies	6900	3-28	43	17.5	14.0	14.6	14
South Mountain No. 2	6340	3-28	36	14.0	12.4	12.1q	12
Stinking Water	4800	3-31	T	T	0.0	1.2	13
Taylor Canyon	6200	4-1	21	8.3	0.0	4.2	12
Tremewan Ranch	5700	3-31	T	T	0.0	1.1	11
Triangle	5150	h					
76 Creek	7100	h					

# WATER SUPPLY OUTLOOK

## BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

### OREGON

*as of*  
APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

#### GENERAL OUTLOOK

Farmers in Northeastern Oregon can expect adequate water supplies for all usual irrigation this season. March brought an excellent increase in snow at nearly all snow courses in this area and increased slightly the forecasts for expected spring and summer streamflow.

#### SNOW-COVER

Water content of the snow-pack is now 113 percent on the Northeastern Oregon watersheds. In spite of the lack of snow on the low elevations, all streams are expected to have average late-season flows. This assumes that normal summer rains will occur.

#### SOIL-MOISTURE

Moisture penetration in the soil-mantle under the snow-pack is very good this year. It has gone deeper than four feet in many locations. This favors an excellent runoff from snow-melt.

#### RESERVOIR STORAGE

Unity Reservoir has been spilling during part of the past month to make room for later runoff. Inflow to Wallowa Lake has not begun yet but will be adequate for the usual uses. These two reservoirs now hold about average supplies.

#### STREAMFLOW

Forecasts for Wallowa County streams vary from 93 percent average for Hurricane Creek to 99 percent average for Bear Creek. Catherine Creek is expected to flow 113 percent of average while the main Grande Ronde is forecast at 100 percent. Discharge of the Powder and Burnt Rivers is expected to be 119 percent and 112 percent of average respectively.

*Report prepared by:*

W T Frost and Manes Bartan  
U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Alder Slope	Average	Average	
Baker Valley	Excellent	Average	
Big Creek	Average	Average	
Claver Creek	Average	Average	
Cave	Average	Average	
Durkee	Average	Average	
Eagle Valley	Excellent	Average	
Elgin	Average	Average	
Enterprise - Joseph	Average	Average	
Hereford - Bridgepart	Average	Average	
Imnaha River	Average	Average	
LaGrande - Island City	Average	Average	
Lastine - Wallowa	Average	Average	
North Powder River - Wolf Creek	Excellent	Average	
Pine Valley	Excellent	Average	
Powder River - Elk Creek	Excellent	Average	
Summerville	Excellent	Average	
Sumpter Valley	Excellent	Average	
Union - Hot Lake	Excellent	Average	
Unity	Average	Average	

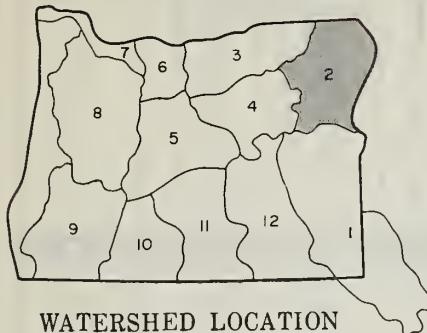
## STREAMFLOW FORECASTS<sup>a</sup> (1,000 Ac. Ft.)

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	
				THIS YEAR AS PERCENT OF NORMAL	
1815	Bear near Wallowa	68	April-Sept.	69	99
143	Burnt near Hereford <sup>c</sup>	47	April-Sept.	42	112
185	Catherine near Union	80	April-Sept.	71	113
1816	Grande Ronde at LaGrande	177	April-Sept.	177	100
1814	Hurricane near Joseph	42	April-Sept.	45	93
172	Imnaha at Imnaha	290	April-Sept.	303	96
1810	Lastine near Lastine	122	April-Sept.	124	98
152	Powder near Baker	75	April-Sept.	63	119
		73	April-July	62	118
1822	Wallowa East Fork near Joseph <sup>c</sup>	10.9	April-Sept.	11.3	96
		8.8	April-July	9.2	96

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

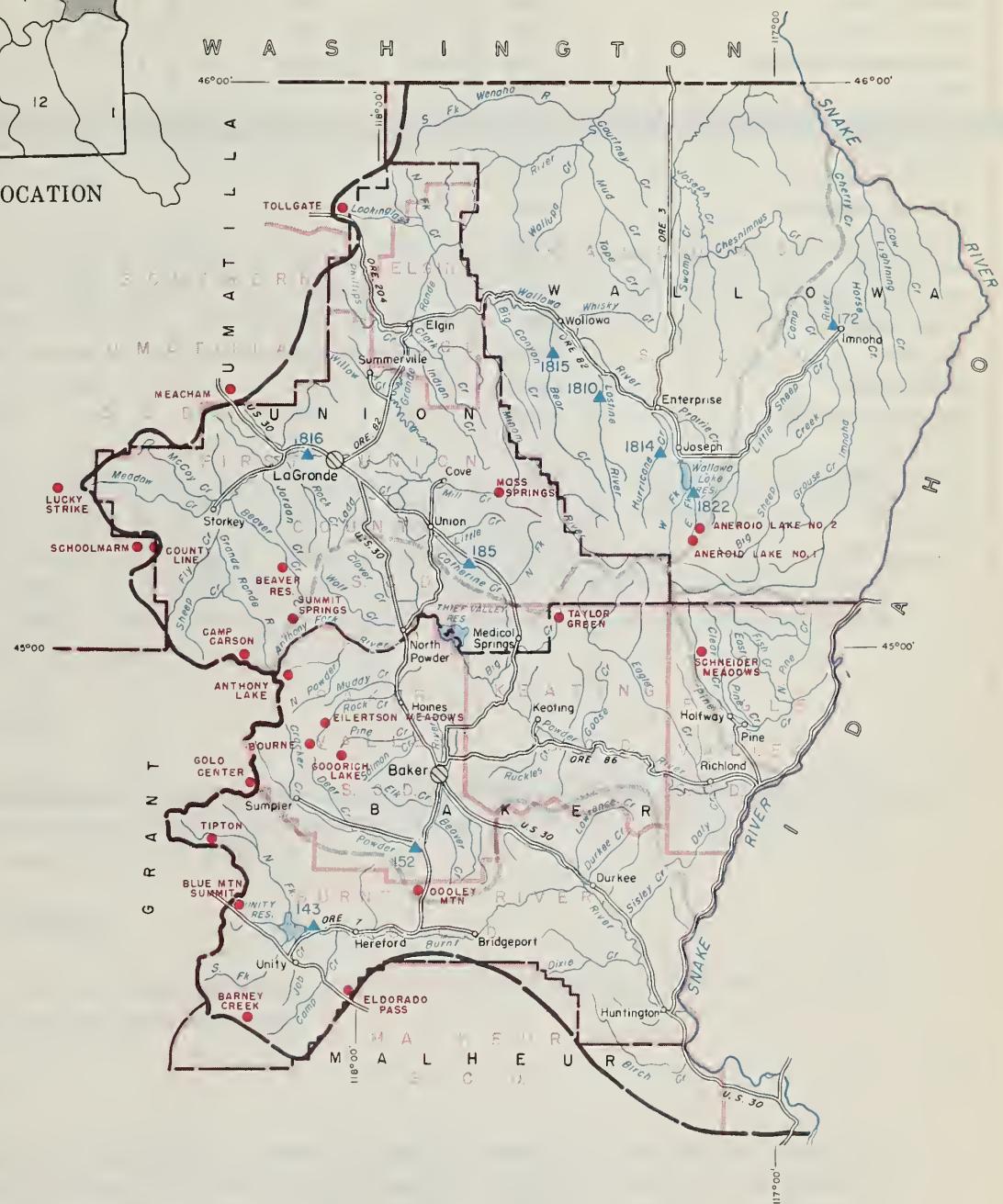
<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated.

# BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



10 0 10 20 30  
SCALE IN MILES

WATERSHED LOCATION



## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL <sup>b</sup>
Unity	25.2	10.3*	22.0	14.9
Wallowa Lake	40.9	26.3	35.6	20.3

## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S. C. D. Boundary
- County Boundary
- Forecast Point
- Snow Course

\*Some water spilled to make room for later runoff.

Burnt, Powder, Pine, Grande Ronde, Imnaha Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	NORMAL <sup>b</sup>
Aneroid Lake No. 1	7480	3-22	103	37.9	32.5	37.2	15
Aneroid Lake No. 2	7000	3-22	80	32.1	25.8	30.1	11
Anthony Lake	7125	3-20	78	29.3	29.3	27.9	15
Barney Creek	5950	4-1	38	10.0	7.3	9.4	8
Beaver Reservoir	5340	3-31	34	11.7	11.4	12.0	14
Blue Mountain Summit	5098	3-27	32	11.5	7.6	7.8	15
Bourne	5800	3-31	58	20.7	15.9	15.9	15
Camp Carson	5970	3-28	28	9.0	- -	8.8	13
County Line	4800	3-28	17	5.8	5.9	- -	1
Dooley Mountain	5430	3-21	34	13.2	6.6	9.1	14
Eilertson Meadows	5400	3-28	45	16.9	9.5	11.9	14
Eldorado Pass	4600	3-27	0	0.0	0.0	- -	0
Gold Center	5340	3-31	43	16.3	12.8	11.9	15
Goodrich Lake	6775	3-20	101	41.8	32.9	41.4	5
Lucky Strike	5050	3-25	45	16.4	- -	13.1	14
Meacham	4300	3-27	21	8.9	7.7	8.7	15
Moss Springs	5850	3-21	68	27.4	26.6	25.1	15
Schneider Meadows	5400	3-26	101	37.0	30.3	29.9	15
Schoolmarm	4775	3-28	12	4.4	5.1	3.6	6
Summit Springs	6000	3-20	64	20.8	20.9	21.1	14
Taylor Green	5740	3-26	52	19.2	17.6	16.8	15
Tipton	5100	3-24	40	14.2	9.6	9.7	13
Tollgate	5070	3-27	67	30.1	23.9	27.9	15

# WATER SUPPLY OUTLOOK

## UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

### OREGON

*as of*  
APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

#### GENERAL OUTLOOK

Farmers irrigating lands in Umatilla, Morrow, and Gilliam Counties can expect adequate water supplies this spring and summer. Reservoired water supplies are excellent. However, the lack of low-elevation snow will cause flow of the smaller streams to fall off slightly earlier than usual.

#### SNOW-COVER

March brought an excellent increase in the snow-pack at high and moderate elevations. The lower elevations are still without snow. Water content of the snow in these watersheds is 108 percent average and 127 percent of last year on this date. At Arbuckle Mountain snow course, at the head of Willow and Butter Creeks, water content of the snow is double that of last year and is 136 percent of average.

#### SOIL-MOISTURE

Measurements at four electronic soil-moisture stations high in the watersheds indicates moisture has penetrated beyond the fourth foot. This will favor runoff to come from snow-melt.

#### RESERVOIR STORAGE

Storage in the McKay Reservoir is excellent and Cold Springs Reservoir is full. McKay can be filled this year.

#### STREAMFLOW

Normal flows during the 6 months irrigation season are forecast for Umatilla and Walla Walla Rivers and McKay Creek. Spring and early summer flow of Birch, Butter, Willow, Rhea and Rock Creeks will be excellent. Adequacy of the late season flow depends in part on summer rains.

Report prepared by \_\_\_\_\_  
W T Frost and Manes Bartan  
U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Birch Creek	Average	Average	
Butter Creek	Average	Average	
Dry Creek	Average	Average	
Dugger Creek	Average	Average	
Johnson Creek	Average	Average	
McKay Creek	Average	Average	
Mill Cr.	Average	Average	
Mud Creek	Average	Average	
Pine Creek	Average	Average	
Rhea Creek	Average	Average	
Umatilla River (Cold Springs Res.)	Excellent	Average	
Umatilla River, Main	Excellent	Average	
Umatilla River (McKay Res.)	Excellent	Average	
Walla Walla River, Little	Average	Average	
Walla Walla River, Main	Average	Average	
Walla Walla River, North Fork	Average	Average	
Walla Walla River, South Fork	Average	Average	
Willow Creek	Average	Average	
<b>Rock Creek</b>	Average	Average	

{ McKay Reservoir can be filled this year

## STREAMFLOW FORECASTS<sup>a</sup> (1,000 Ac. Ft.)

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>		THIS YEAR AS PERCENT OF NORMAL
				NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL	
2213	McKay near Pilot Rock	28 28	April-Sept. April-July	28 28	100 100	
2236	Umatilla near Gibbon	85	April-Sept.	87	98	
223	Umatilla at Pendleton	165 155	April-Sept. April-July	167 155	99 100	
214	Walla Walla, South Fork near Milton	68 56	April-Sept. April-July	71 58	96 97	

## SNOW

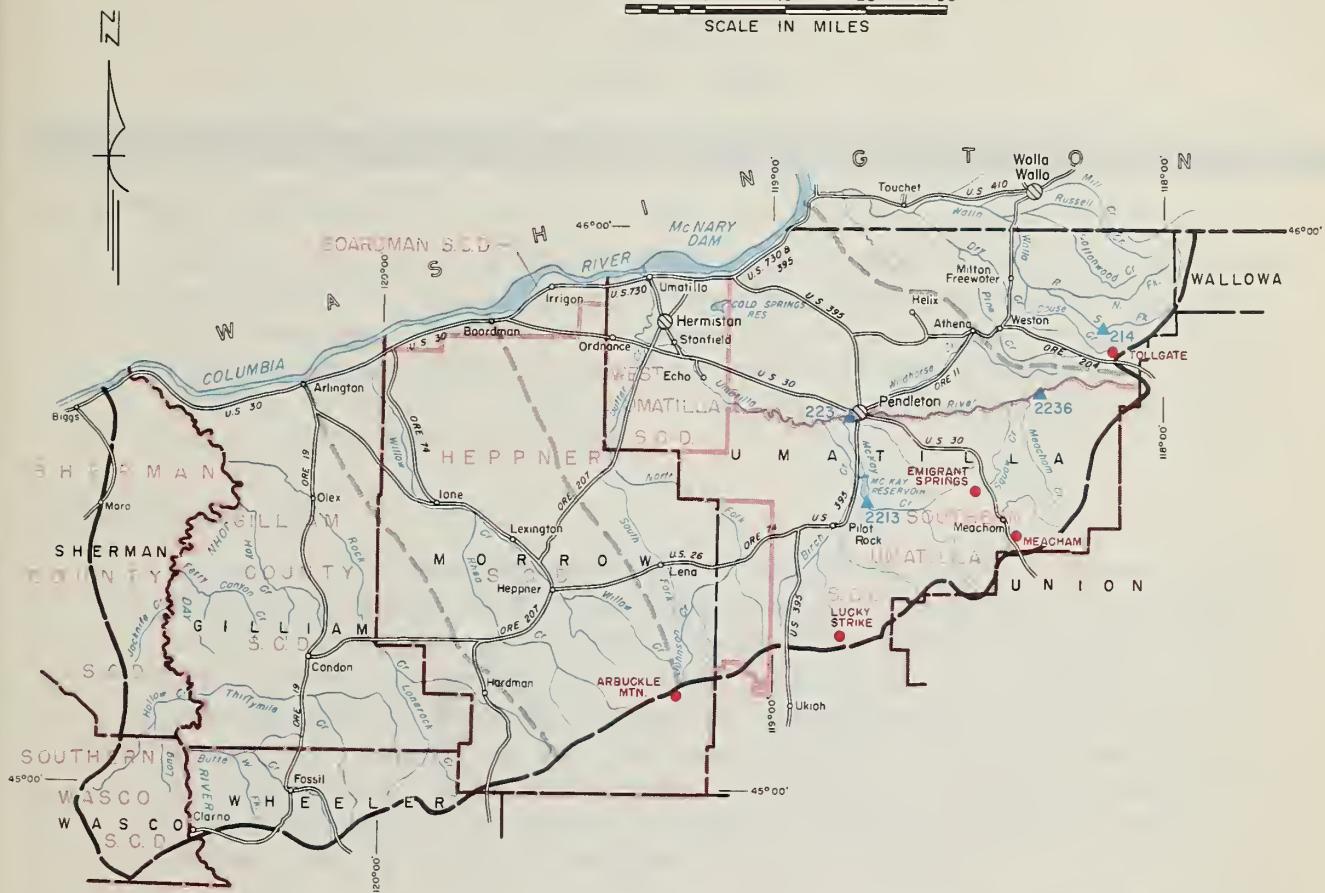
SNOW COURSE	CURRENT INFORMATION			PAST RECORD		YEARS OF <sup>c</sup> RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)		
					LAST YEAR	NORMAL <sup>b</sup>	
Arbuckle Mountain	5400	3-27	35	14.7	7.8	10.8	15
Emigrant Springs	3925	3-27	4	1.4	4.0	5.8	15
Lucky Strike	5050	3-25	45	16.4	—	13.1	14
Meacham	4300	3-27	21	8.9	7.7	8.7	15
Tollgate	5070	3-27	67	30.1	23.9	27.9	15

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated.

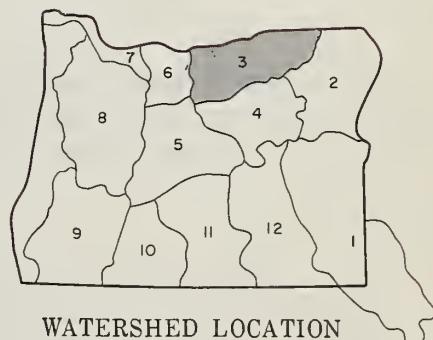
# UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S. C. D. Boundary
- County Boundary
- Forecast Point
- Snow Course



## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL
Cold Springs Mc Kay	50.0 74.0	50.0 65.3	45.2 52.4	48.2 58.9

**Umatilla, Walla Walla, Willow, Rock, Lower John Day Watersheds**

*"The Conservation of Water begins with the Snow Survey"*

# WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

*as of*  
APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

## GENERAL OUTLOOK

Farmers irrigating lands of the John Day watersheds in Grant and Wheeler Counties can expect adequate water supplies this season. The lack of low-elevation snow is expected to reduce only slightly the late-season flow of a few of the smaller streams. Adequate summer rains could easily prevent any late-season shortages.

## SNOW-COVER

In spite of warm temperatures, March brought a near normal amount of snow at all but the lowest elevations. Records at the Schoolmarm Course, (elevation 4775), indicate that snow-cover actually increased during March instead of decreasing as is normal. Present snow-cover in the total watershed averages 124 percent normal and 129 percent of last year. Water content of the snow at Olive Lake increased from 21.8 inches to 26.7 inches, which is well above the April 1st average of 19.9 inches.

## SOIL-MOISTURE

Soil-moisture measurements made in the past two weeks indicate soils under the snow-pack are well wetted. This will favor a satisfactory runoff from snow-melt.

## STREAMFLOW

Flow of the main tributaries of the John Day River is predicted to be about 10 percent greater than average during the irrigation season. Late season flows of the smaller streams are expected to be about average. They should certainly flow better than last year.

Report prepared by: \_\_\_\_\_  
W. T. Frost and Manes Barton  
U. S. Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Beech Creek	Average	Average	
Beech Creek-Fox-Long Creek	Average	Average	
Bridge Mountain Creeks	Average	Average	
Camas Creek	Average	Average	
Cherry Creek	Average	Average	
Indian-Pine Creeks	Average	Average	
John Day River, Main Fork	Excellent	Average	
John Day River, Mid. Fork	Excellent	Average	
John Day River, North Fork	Excellent	Average	
John Day River, South Fork	Excellent	Average	
Monument-Kimberly	Average	Average	
Strawberry Creek	Excellent	Average	

## STREAMFLOW FORECASTS<sup>a</sup> (1,000 Ac. Ft.)

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>		THIS YEAR AS PERCENT OF NORMAL
				NORMAL	AS PERCENT OF NORMAL	
2415	John Day at Prairie City	55 50	April-Sept. April-July	50 45	110 111	
2433	John Day, Mid. Fork at Ritter	135	April-Sept.	122	111	
2432	John Day, North Fork near Dale	273	April-Sept.	248	110	
2434	Strawberry near Prairie City	8.9	April-Sept.	8.3	107	

## SNOW

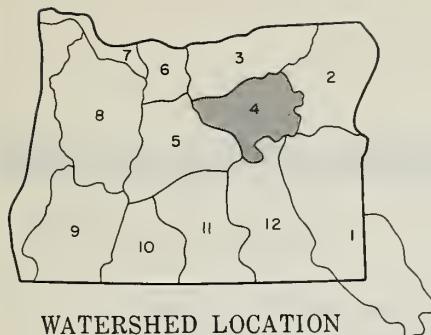
SNOW COURSE	CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD	
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)		
					LAST YEAR	NORMAL <sup>b</sup>	
Anthony Lake	7125	3-20	78	29.3	29.3	27.9	15
Arbuckle Mountain	5400	3-27	35	14.7	7.8	10.8	15
Beech Creek Summit	4800	3-27	13	4.8	4.2	4.7	15
Blue Mountain Springs	5900	3-25	59	21.2	16.2	15.8	15
Blue Mountain Summit	5098	3-27	32	11.5	7.6	7.8	15
Derr	5670	3-26	30	10.5	8.1	10.3	15
Dixie Springs	6650	3-27	73	27.7	22.0	23.9	15
Gold Center	5340	3-31	43	16.3	12.8	11.9	15
Izee Summit	5293	3-27	33	12.4	8.4	7.5	15
Lucky Strike	5050	3-25	45	16.4	- -	13.1	14
Marks Creek	4540	3-27	3	1.2	0.6	3.3	15
Ochoco Meadows	5200	3-28	39	15.4	8.2	11.3	15
Olive Lake	6000	3-26	69	26.7	21.8	19.9	15
Schoolmarm	4775	3-28	12	4.4	5.1	3.6	6
Snow Mountain	6300	3-26	47	17.1	14.5	15.1	9
Starr Ridge	5156	3-27	18	6.2	4.8	4.7	15
Tipton	5100	3-24	40	14.2	9.6	9.7	13

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

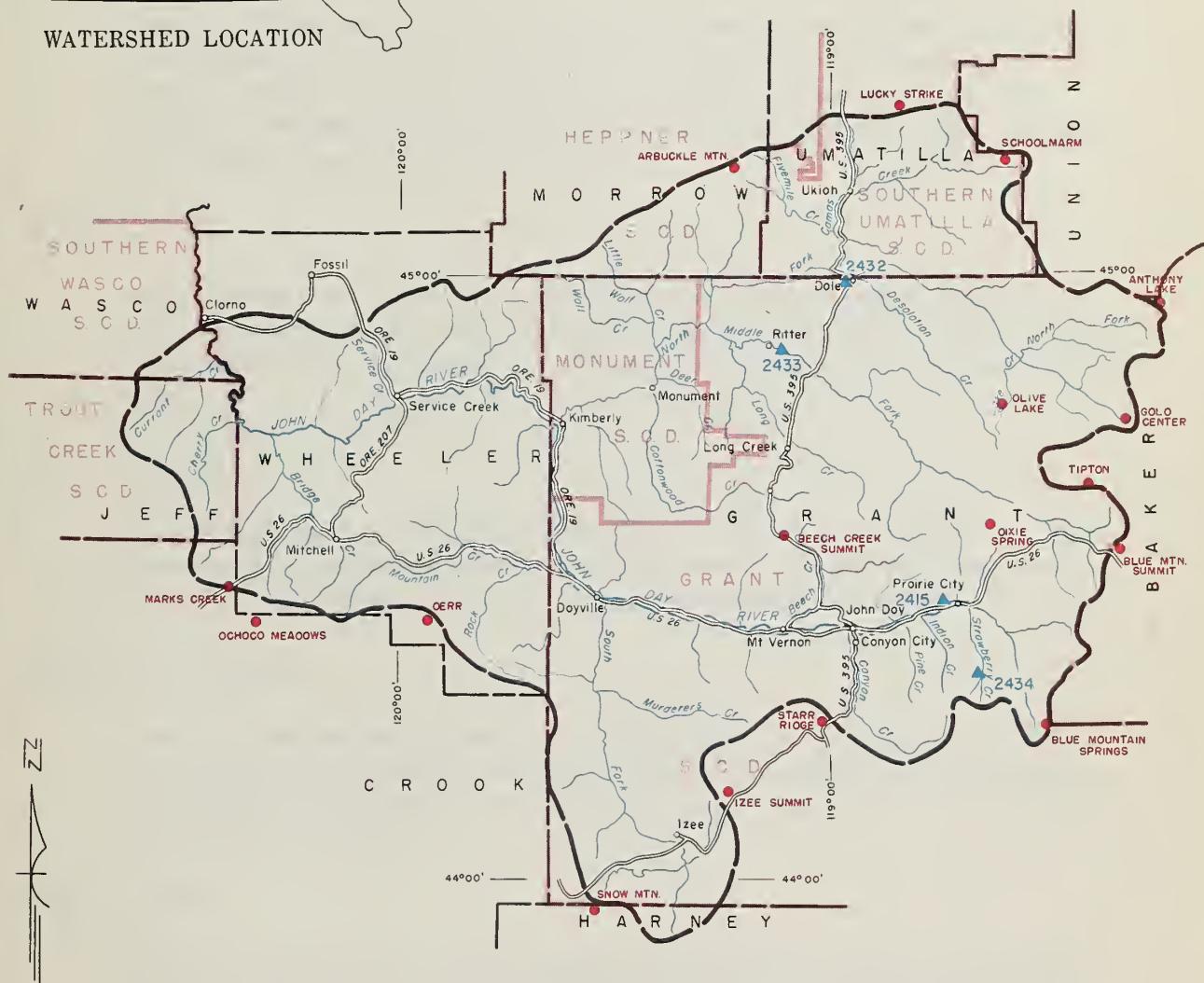
<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated.

# UPPER JOHN DAY WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



WATERSHED LOCATION



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S.C.D. Boundary
- County Boundary
- Forecast Point
- Snow Course



# WATER SUPPLY OUTLOOK

## UPPER DESCHUTES, CROOKED WATERSHEDS

### OREGON

*as of*

APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

#### GENERAL OUTLOOK

Farmers in Deschutes, Crook and Jefferson Counties who irrigate lands served from the major streams will have excellent to average water supplies this season. Reservoired water supplies are excellent. However, those lands irrigated from smaller streams, without benefit of storage facilities, will have less adequate supplies in the late season.

#### SNOW-COVER

March brought near normal amounts of snow at moderate and high elevations. The low elevations have been without snow most of the winter. Water content of the snow is now 120 percent of average and 132 percent of last year at this time.

#### SOIL-MOISTURE

Soils in the mountain watersheds under the snow-pack are well wetted. This factor favors a satisfactory runoff from snow-melt. The soil moisture station at Marks Creek indicates moisture penetration well beyond the 3 foot point.

#### RESERVOIR STORAGE

Storage in the four major reservoirs, Crane Prairie, Crescent Lake, Ochoco, and Wickiup, is 160 percent average. Ochoco is currently being spilled to make room for later inflow. Stock ponds and small reservoirs in Crook County are reported to be full.

#### STREAMFLOW

Forecasts of flow for the irrigation season range from 114 percent average for Squaw Creek to 89 percent average for the Little Deschutes near Lapine. Flow of Crooked River and inflow to Ochoco Reservoir is expected to be 110 percent average.

*Report prepared by*

W T Frost and Manes Borton  
U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Arnold I. D.	Average	Average	
Bear Creek	Average	Average	
Beaver Creek	Average	Average	
Camp Creek	Average	Average	
Central Oregon I. D.	Excellent	Average	
Crooked River	Average	Average	
Deschutes River	Excellent	Average	
Hay-Trout Creeks	Average	Average	
Lone Pine I. D.	Average	Average	
Mill Creek	Average	Average	
North Unit I. D.	Excellent	Average	
Ochoco Creek	Average	Average	
Ochoco I. D.	Excellent	Average	
Sisters I. D.	Excellent	Average	
Snow Creek I. D.	Average	Average	
Squaw Creek I. D.	Excellent	Average	
Swalley Ditch	Excellent	Average	
Tumalo Project	Excellent	Average	
Walker Basin I. D.	Average	Average	

## STREAMFLOW FORECASTS<sup>a</sup> (1,000 Ac. Ft.)

NO.	NAME	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL
3220A	Crane Prairie Reservoir net inflow		125	April - Sept.	121	103
323	Crescent at Crescent Lake <sup>c</sup>		19	April - Sept.	21	90
342	Crooked near Post		136	April - Sept.	124 <sup>d</sup>	110
317	Deschutes at Benham Falls <sup>e</sup>		505	April - Sept.	511	99
			345	April - July	346	100
3225	Deschutes below Snow Creek		66	April - Sept.	60	110
314	Deschutes, Little near Lapine <sup>e</sup>		80	April - Sept.	90	89
			71	April - July	79	90
3421	Ochoco Reservoir net inflow		31	April - Sept.	28	110
3212	Odell near Crescent		28	April - Sept.	29	97
335	Squaw near Sisters		56	April - Sept.	49	114
338A	Tumalo near Bend <sup>e</sup>		54	April - Sept.	48	113

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

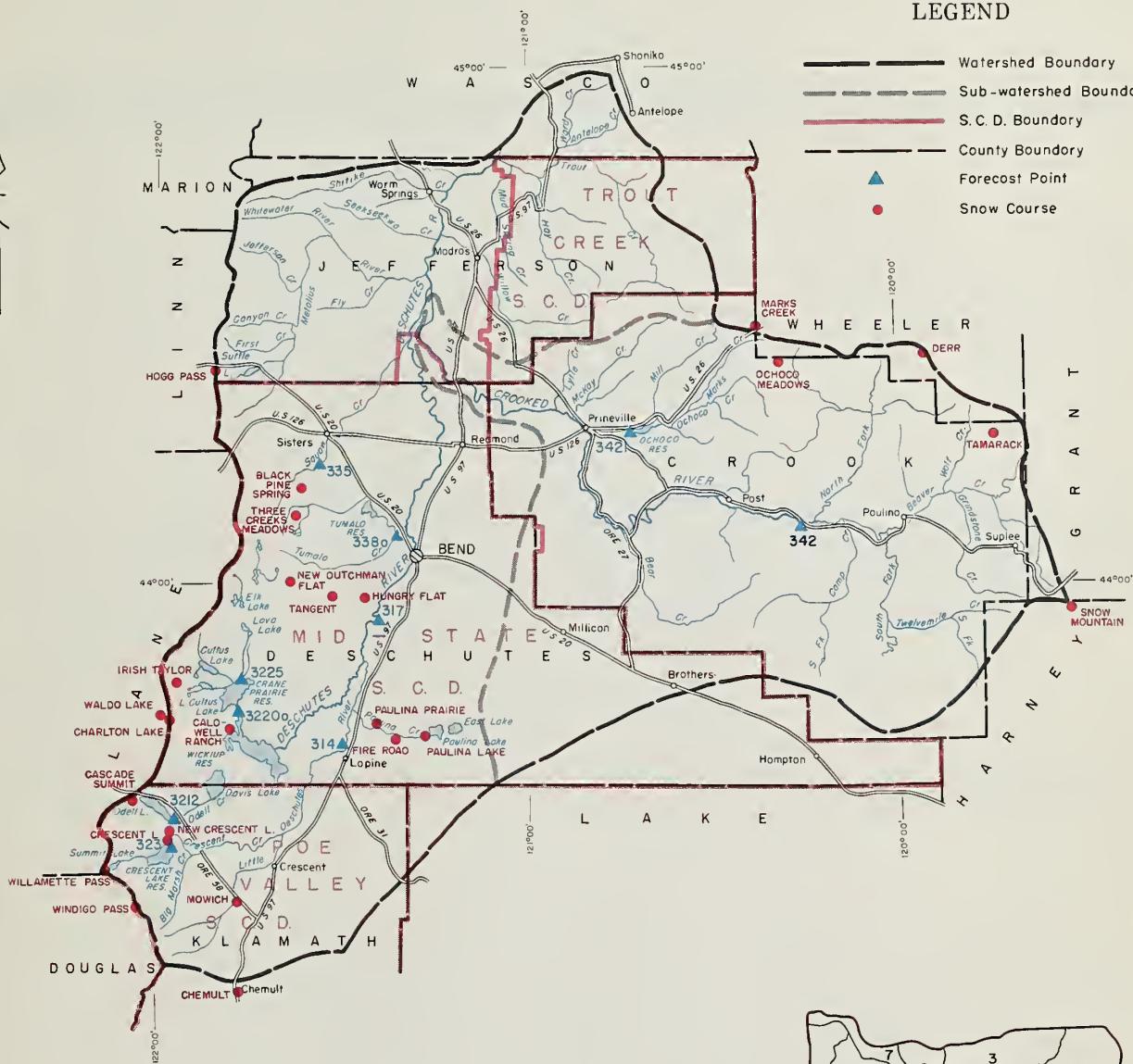
<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage, water content estimated. <sup>g</sup> 1938-39 excepted.

# UPPER DESCHUTES, CROOKED WATERSHEDS

10 0 10 20 30  
SCALE IN MILES

## LEGEND

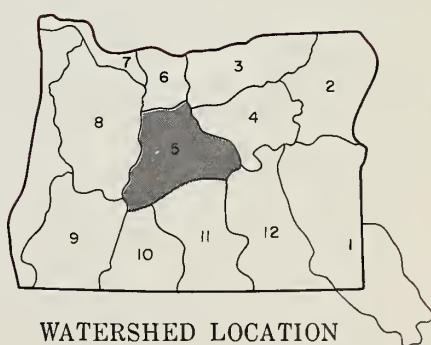
- Watershed Boundary
- Sub-watershed Boundary
- S. C. D. Boundary
- County Boundary
- Forecast Point
- Snow Course



## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL <sup>b</sup>
Crane Prairie	55.3	54.8	58.7	38.4
Crescent Lake	68.0	66.2	68.1	42.1
Ochoco	460	38.3**	44.7	28.3
Wickiup	2000	196.8	200.0	112.3*

\*1938-42 excepted. \*\*Spilling to make room for later inflow.



## SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	NORMAL b	
Black Pine Spring	4600	3-18	17	4.3	2.7	--	1
Caldwell Ranch	4400	3-26	24	9.6	6.0	8.4	14
Cascade Summit	4880	3-27	75	32.2	29.2	32.2	15
Charlton Lake	5750	3-25	90	33.3	24.1	27.8	11
Chemult	4760	3-27	29	11.0	2.9	9.6	14
Crescent Lake	4760	3-27	37	17.7	6.7	10.0	15
Derr	5670	3-26	30	10.5	8.1	10.3	15
Fire Road	5050	3-20	18	7.0	4.0	--	0
Hogg Pass	4755	3-27	102	46.1	38.1	43.8	14
Hungry Flat	4400	3-19	13	5.0	0.0	--	0
Irish-Taylor	5500	3-26	110	44.6	35.5	--	3
Marks Creek	4540	3-27	3	1.2	0.5	3.3	15
Mowich	4700	3-28	3	1.2	0.0	--	0
New Crescent Lake	4800	3-27	47	18.1	12.1	--	1
New Dutchman Flot	6400	3-19	136	61.9	45.1	53.1	12
Ochoco Meadows	5200	3-28	39	15.4	8.2	11.3	15
Poulin Lake	6330	3-20	58	24.1	21.5	--	0
Paulina Proirie	4285	3-20	0	0.0	0.0	--	0
Snow Mountain	6300	3-26	47	17.1	14.5	15.1	9
Tamarack	4800	d					
Tangent	5400	3-19	71	28.1	14.1	--	1
Three Creeks Meadows	5600	3-18	65	25.1	11.9	20.9	15
Waldo Lake	5500	3-25	82	32.7	26.6	29.3	14
Willamette Poss	5600	3-28	112	46.0	37.0	--	4
Windigo Poss	5800	3-27	128	55.8	40.8	55.3	5

# WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

*as of*  
APRIL 1, 1958

**U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION**

## GENERAL OUTLOOK

Farmers in Hood River Valley and on Wasco County lands can expect generally satisfactory water supplies this year. However, the smaller streams, heading in watersheds of moderate or low elevations, will fall off earlier than usual unless summer rains are unusually heavy.

## SNOW-COVER

March brought a little more than the normal contribution of snow at the higher elevations. No snow was received on the lower slopes where it is needed to sustain the water supplies of lower streams. Present water content of the snow-pack is 92 percent of normal.

## SOIL-MOISTURE

Soils in the upper watersheds are adequately wet and will favorably support a satisfactory runoff from snow-melt.

## STREAMFLOW

Streamflow slightly above normal is predicted for Hood River and White River during the irrigation season. Flow of smaller streams and tributaries, such as Mill Creek, the Mile Creeks, Tygh Creek, Badger Creek, Rock-Gate-Threemile Creeks, and Clear Creek supplying the Juniper Flat area, will be satisfactory in the spring season but will fall off earlier than usual.

*Report prepared by*

W T Frost and Manes Barton  
U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Aldridge Ditch	Average	Fair	
Badger Creek	Average	Fair	
Dee I. D.	Average	Average	
East Fork I. D.	Average	Average	
Farmers I. D.	Average	Average	
Glacier I. D.	Average	Average	
Hood River	Average	Average	
Juniper Flat	Average	Fair	
Middle Fork I. D.	Average	Average	
Mile Creek	Average	Fair	
Mill Creek	Average	Fair	
Mount Hood I. D.	Average	Average	
Rock-Gate-Threemile Creeks	Average	Fair	
Tygh Creek	Average	Fair	
White River	Average	Average	

## STREAMFLOW FORECASTS<sup>a</sup> (1,000 Ac. Ft.)

NO.	NAME	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>		THIS YEAR AS PERCENT OF NORMAL
					FORECAST THIS YEAR	NORMAL <sup>b</sup>	
437	Hood near Hood River <sup>e</sup>		312 266	April-Sept. April-July	306 260	102 102	
438	Hood, West Fork near Dee		150 130	April-Sept. April-July	147 127	102 102	
3613	White below Tygh Valley		153 136	April-Sept. April-July	152 135	101 101	

## SNOW

SNOW COURSE	CURRENT INFORMATION				PAST RECORD		YEARS OF <sup>c</sup> RECORD
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
						LAST YEAR	
Brooks Meadows	4300	3-27	26	11.1	9.9	12.9	15
Clear Lake	3500	3-26	15	5.7	11.0	14.2	15
Greenpoint Reservoir	3400	3-20	30	13.0	20.8	- -	2
Phlox Point	5600	3-24	152	76.1	44.8	61.5	14
Red Hill	4400	3-26	92	42.3	41.7	66.3	5
Still Creek	3700	3-24	46	20.5	18.9	24.0	15
Tilly Jane	6000	3-23	122	52.9	38.9	55.0	5

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated.

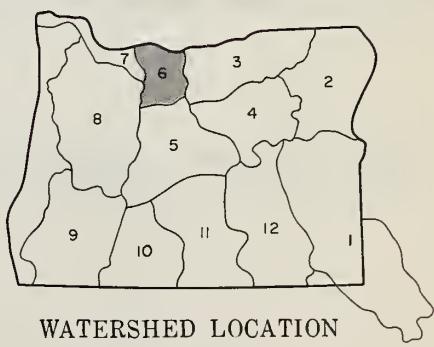
# HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S.C.D. Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course



WATERSHED LOCATION



# WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

*as of*

APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

## GENERAL OUTLOOK

Accumulation of snow during March in the Columbia Basin was near normal. The flow of the Columbia at The Dalles is forecast to be 96 percent of the 1938-52 fifteen year average.

## SNOW-COVER

Snow cover on Columbia River tributary watersheds run very close to normal on all of the major drainages. The basin as a whole is about 95 percent of the 1938-52 average.

## SOIL-MOISTURE

Watershed soils under the mountain snow-pack are still relatively dry but have improved slightly in some areas.

## RESERVOIRS

Storage in irrigation reservoirs continues to be well above normal. Operation of multiple-purpose reservoirs is proceeding in accordance with operational plans directed at giving maximum results for flood control, power and irrigation use. In recent years these operations made possible the storage of approximately 5,000,000 acre feet of water during April-June.

## STREAMFLOW

The forecasts presented in this report are for the natural flow that would occur in the river if no upstream management were performed. Thus, the actual flow of the Columbia at The Dalles during April-June will be approximately 5,000,000 acre feet less than the forecasts given.

## NOTICE

Columbia Basin Water Forecast Meeting to be held 9:00 a.m., April 11, 1958, Interior Building Auditorium, Portland, Oregon -- All Welcome.

Report prepared by:

W. T. Frost and Munes Burton  
U. S. Department of Agriculture, Soil Conservation Service  
209 S. W. Fifth Avenue, Portland, Oregon

# STREAMFLOW FORECASTS <sup>a</sup> (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL
Columbia at The Dalles	93,000 63,000 <sup>c</sup>	Apr.-Sept. Apr.-June May-June	97,000 65,900 51,800	96 96

## HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW <sup>c</sup> (1,000 A.F.)			PEAK <sup>e</sup> (1,000 C.F.S.)	DATE
	APR. - SEPT.	APR. - JUNE	MAY - JUNE		
1938	103,400	72,600	56,700	605	May 31
1939	80,800	53,300	40,500	387	May 21
1940	77,400	52,100	38,900	369	June 5
1941	69,100	43,500	33,500	272	June 11
1942	90,300	58,100	44,500	428	June 18
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,500	54,600	47,300	505	June 8
1946	108,000	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,600	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1938-52 Avg.	97,000	65,900	51,800	538	
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,200	97,100	75,800	554	Apr. 26
1957	115,200	79,200	67,200	685	May 22

## LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria) <sup>f</sup>

VANCOUVER <sup>g</sup> GAGE (WEATHER BU.)	FLOW AT THE DALLES (1000 cfs)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE IS.	SCAPPOOSE	DEER IS.	RAINIER	BEAVER	WOODSON
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35	1,290	42.2	35.3	34.4	29.6	22.9	18.3	16.2
34 (1894)	1,220	41.3	34.4	33.4	28.5	22.0	17.5	15.5
33	1,150	40.4	33.3	32.3	27.5	21.0	16.7	14.8
32	1,090	39.5	32.2	31.2	26.5	20.0	15.9	14.1
31	1,030	38.5	31.2	30.1	25.5	19.1	15.1	13.4
30 (1948)	970	37.4	30.1	29.0	24.0	18.3	14.4	12.7
29 (1876)	920	36.2	29.1	28.1	23.9	17.7	13.8	12.1
28	870	35.1	28.1	27.3	23.3	17.2	13.3	11.6
27	820	33.8	27.1	26.4	22.4	16.6	12.8	11.2
26	770	32.5	26.1	25.3	21.4	15.8	12.3	10.8
(1933)								
25 (1950)	730	31.8	25.1	24.1	20.4	15.1	11.9	10.5
24 (1957)	690	30.3	24.0	23.0	19.5	14.5	11.6	10.3
23	650	29.5	22.9	21.9	18.7	13.9	11.3	10.1
22 (1953)	610	28.6	21.9	20.8	17.6	13.3	11.0	9.9
21	570	27.6	21.0	19.8	16.6	12.7	10.7	9.7
20	540	26.5	20.1	18.9	15.7	12.2	10.3	9.5
19	510	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	480	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	450	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	430	22.4	16.5	15.5	13.0	10.5	9.3	8.7
15	400	21.4	15.5	14.4	12.0	9.8	8.8	8.3

<sup>a</sup>Assuming normal meteorological conditions.

<sup>b</sup>1938-'52, 15 year period.

<sup>c</sup>Observed flow corrected

for storage in F.D.R., Kootenai, Pend Oreille, Flathead, Hungry Horse, Lake Chelan, Coeur d'Alene and Grand Coulee Equalizer.

<sup>d</sup>Not scheduled.

<sup>e</sup>Observed peak

# LOWER COLUMBIA WATERSHEDS

10 0 10 20 30  
SCALE IN MILES

PACIFIC



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S.C.D. Boundary
- County Boundary
- (50) River Miles

<sup>f</sup>Based on Corps of Engineers automatic water stage recorder data.

<sup>g</sup>Vancouver Weather Bureau gage zero is 2.64' above M.S.L. All other readings are in feet above M.S.L.

## Lower Columbia Watersheds



# WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

*as of*  
APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION  
GENERAL OUTLOOK

Irrigation water supplies for Willamette Valley lands will be adequate for nearly all areas this season. Streams flowing from low or moderate elevation watersheds can expect smaller flows than usual in the late season unless satisfactory rains are received.

## SNOW-COVER

There is very little snow in the hills below 3000 feet. At moderate elevations up to about 4000 feet, the snow is considerably less than normal. In the higher elevations, the snow-pack is very satisfactory. Water content of the snow-pack over the basin averages 97 percent of the 15 year normal and is 124 percent of last year.

## SOIL-MOISTURE

The soil-mantle in the upper watersheds is reported to be satisfactorily wet under the snow-pack. This condition will favor runoff from snow-melt.

## RESERVOIR STORAGE

Water stored in five multiple-purpose reservoirs, Cottage Grove, Detroit, Dorena, Fern Ridge, and Lookout Point, is about 20 percent less than last year. However, ample runoff is available to fill these reservoirs before onset of the "dry" season.

## STREAMFLOW

Forecasts of streamflow for the April-September period are close to the 15 year normal, 1938-52. Expected flows range from a low of 90 percent on the Clackamas to 107 percent for the Middle Fork of the Willamette. Late season flows may fall below average in some streams like the Calapooya, Pudding and Molalla Rivers which do not head in the high Cascades.

Report prepared by  
W T Frost and Manes Burton  
U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK <sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Calapooia	Average	Fair	
Clackamas	Average	Average	
McKenzie	Average	Average	
Mollalla	Average	Fair	
Santiam, North	Average	Average	
Santiam, South	Average	Average	
Willamette, Coast Fork	Average	Average	
Willamette, Middle Fork	Average	Average	

## STREAMFLOW FORECASTS <sup>a</sup> (1,000 Ac. Ft.)

NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL
5911	Clackamas at Big Bottom	150	April-Sept.	164	91
		121	April-July	133	91
593	Clackamas near Cazadero	700	April-Sept.	777	90
		610	April-July	669	91
592	Clackamas above Three Lynx	540	April-Sept.	599	90
		455	April-July	507	90
534	McKenzie at Mckenzie Bridge	605	April-Sept.	565	107
		460	April-July	430	107
535	McKenzie near Vida	1280	April-Sept.	1195	107
		1050	April-July	978	107
598	Oak Grove Fork above Power Intake	173	April-Sept.	186	93
		135	April-July	145	93
5215	Row near Dorena	97	April-Sept.	101	96
		92	April-July	96	96
554	Santiam, North at Mehama <sup>c</sup>	880	April-Sept.	842	105
		790	April-July	748	106
5516	Santiam, South at Waterloo	560	April-Sept.	558	100
		525	April-July	525	100
5117	Willamette, Mid. Fork below North Fork near Oakridge	860	April-Sept.	798	107
		755	April-July	705	107
516	Willamette at Salem	4800	April-Sept.	4355	110
		4300	April-July	3863	111

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

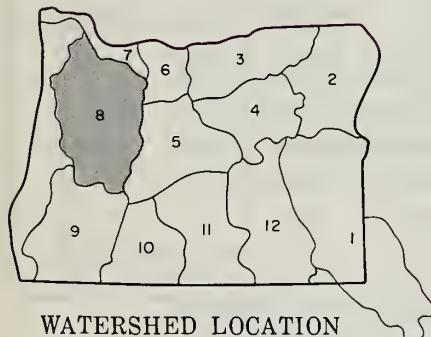
<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated.

# WILLAMETTE WATERSHEDS

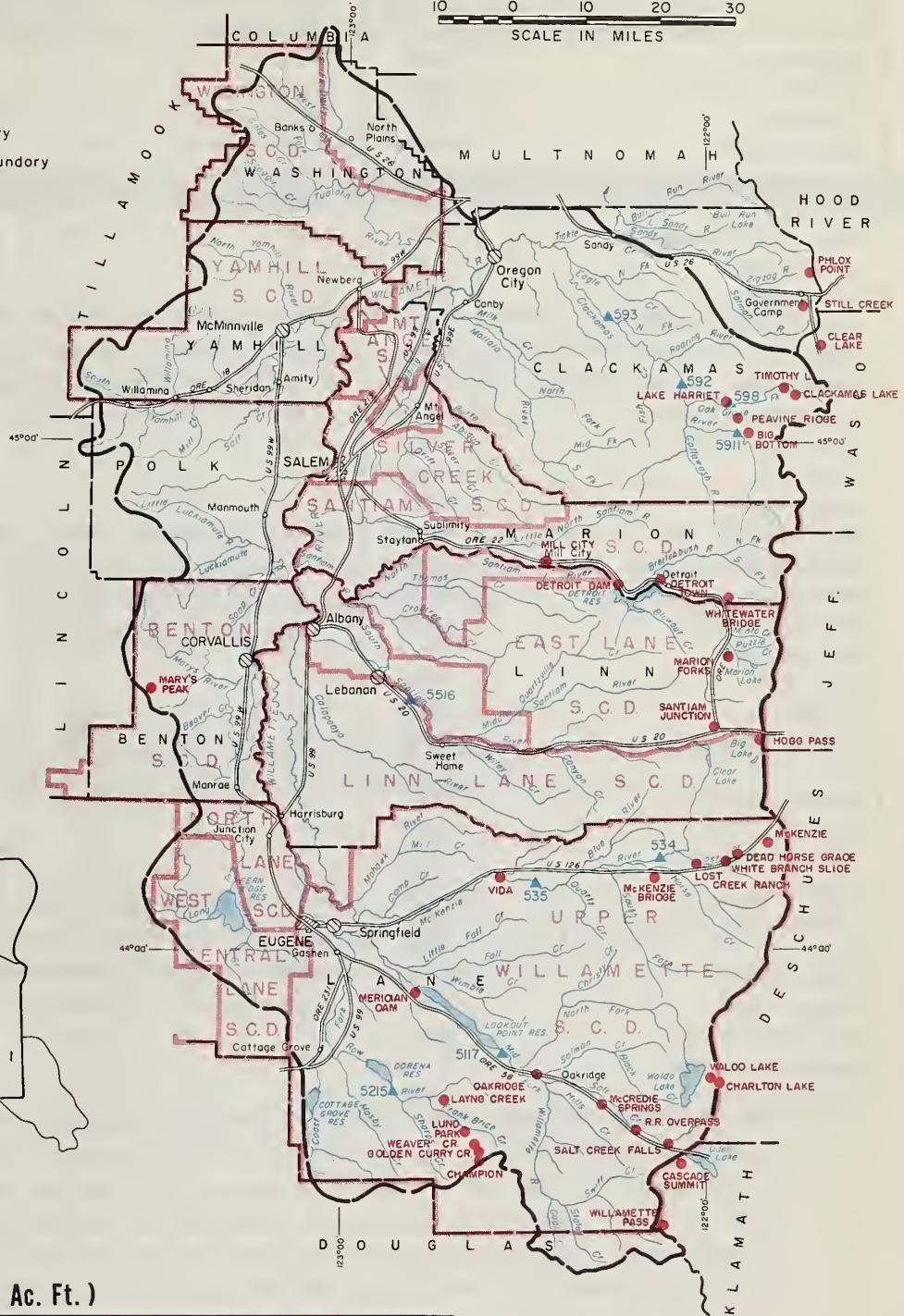
10 0 10 20 30  
SCALE IN MILES

## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S. C. D. Boundary
- County Boundary
- Forecast Point
- Snow Course



## WATERSHED LOCATION



## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL <sup>b</sup>
Cottage Grove	30.1*	16.5	17.9	16.6**
Detroit	340.0*	171.1	217.3	—
Dorena	70.5*	35.8	40.7	—
Fern Ridge	94.2*	68.5	72.7	56.3***
Lookout Point	350.0*	154.8	215.4	—

\* Storage space reserved for flood control. \*\*1938-42 excepted. \*\*\*1938-41 excepted

Correction:  
For East Lane S. C. D.  
read East Linn S. C. D.

## SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	
Big Bottom	2118	3-31	0	0.0	0.0	- -	2
Cascade Summit	4880	3-27	75	32.2	29.2	32.2	15
Champion	4500	3-28	59	27.9	16.9	27.9	14
Chorlton Lake	5750	3-25	90	33.3	24.1	27.8	11
Clackamas Lake	3400	3-31	18	8.1	8.3	15.7	12
Clear Lake	3500	3-26	15	5.7	11.0	14.2	15
Deod Horse Grode	3800	3-25	30	11.4	12.0	- -	3
Detroit Town	1600	3-27	0	0.0	0.0	- -	2
Detroit Dam	1580	3-27	0	0.0	0.0	- -	2
Golden Curry Creek	3136	3-28	0	0.0	0.0	- -	3
Hogg Pass	4755	3-27	102	46.1	38.1	43.8	14
Lake Harriet	2045	3-31	0	0.0	0.0	- -	2
Layng Creek	1200	3-28	0	0.0	0.0	- -	3
Lost Creek Ranch	1746	3-25	0	0.0	0.0	- -	1
Lund Park	1740	3-28	0	0.0	0.0	- -	3
Morion Forks	2730	3-27	18	8.3	10.0	13.6	12
Morys Peak	3620	3-30	14	4.0	- -	11.6	11
McCredie Springs	2120	3-27	0	0.0	0.0	- -	3
McKenzie	4800	3-25	100	48.5	39.1	41.7	13
McKenzie Bridge	1372	3-25	0	0.0	0.0	- -	2
Meridion Dam	750	3-27	0	0.0	0.0	- -	3
Mill City	826	3-27	0	0.0	0.0	- -	2
Oakridge	1310	3-27	0	0.0	0.0	- -	3
Peavine Ridge	3500	3-31	31	13.6	14.0	19.8	15
Phlox Point	5600	3-24	152	76.1	44.8	61.5	14
Railroad Overpass	2750	3-27	0	0.0	0.0	- -	3
Salt Creek Falls	4000	3-27	24	8.2	9.2	- -	3
Santiam Junction	3990	3-27	47	20.7	14.1	25.3	12
Still Creek	3700	3-24	46	20.5	18.9	24.0	15
Timothy Lake	3295	3-31	31	12.5	11.6	- -	0
Vida	800	3-25	0	0.0	0.0	- -	2
Waldo Lake	5500	3-25	82	32.7	26.6	29.3	14
Weover Creek	2440	3-28	0	0.0	0.0	- -	2
White Branch Slide	2800	3-25	0	0.0	0.0	- -	3
Whitewater Bridge	2175	3-29	0	0.0	0.0	- -	3
Willamette Pass	5600	3-28	112	46.0	37.0	- -	4

# WATER SUPPLY OUTLOOK ROGUE, UMPQUA WATERSHEDS OREGON

*as of*

APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

## GENERAL OUTLOOK

Farmers in the Rogue and Umpqua watersheds can expect adequate water for irrigation this season. Above normal contributions of ground-water to streamflow are expected to partially offset the lack of low-elevation snow. Adequate summer rains will be needed to keep streamflow normal in the lower elevations.

## SNOW-COVER

Water content of the mountain snow-pack is now 119 percent of the 15 year average (1938-52) and 146 percent of last year at this date. Snow is lacking or much below normal at elevations below 4300 feet. At the high elevations the snow is much above normal.

## SOIL-MOISTURE

The soil-mantle in the upper watersheds under the snow-pack is somewhat wetter than normal. This favors a satisfactory runoff from snow-melt.

## RESERVOIR STORAGE

Water now stored in four Rogue reservoirs, Fourmile, Fish Lake, Emigrant and Hyatt Lakes, is somewhat less than last year, but is 144 percent of the 15 year average. Adequate streamflow is "in sight" to fill these reservoirs unless withdrawal is begun early.

## STREAMFLOW

Forecasts of streamflow during the irrigation season (April-September) are all at normal or above normal except the inflow to Hyatt Prairie Reservoir, which is expected to be 83 percent of average. The North Umpqua below Lake Creek is forecast to discharge 104 percent of average. Flow of the Rogue at Raygold is expected to be 106 percent of average. The Illinois River is forecast at 110 percent and the Applegate at 142 percent of the average.

*Report prepared by*

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U S Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK <sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Althouse Creek	Average	Average	
Applegate River, Big	Excellent	Average	
Applegate River, Little	Excellent	Average	
Ashland Creek	Excellent	Average	
Butte Creek, Little	Average	Average	
Cow Creek	Average	Average	
Deer Creek	Average	Average	
Eagle Point I. D.	Excellent	Average	
Elk Creek	Average	Average	
Emigrant Creek (above Reservoir)	Average	Average	
Evans Creek	Average	Average	
Gold Hill I. D.	Excellent	Average	
Grants Pass I. D.	Excellent	Average	
Grave Creek	Average	Average	
Illinois River, East Fork	Excellent	Average	
Illinois River, West Fork	Excellent	Average	
Medford I. D.	Excellent	Average	
Neil Creek	Average	Average	
Red Blanket Creek	Average	Average	
Rogue River	Excellent	Average	
Rogue River Valley I. D.	Excellent	Average	
Sucker Creek	Excellent	Average	
Table Rock I. D.	Excellent	Average	
Talent I. D.	Average	Fair	
Thompson Creek	Excellent	Average	
Wagner Creek	Average	Average	
Williams Creek	Excellent	Average	

Low flow of Rogue at  
Savage Rapids Dam not  
expected to fall below  
950 c.f.s.

## STREAMFLOW FORECASTS <sup>a</sup> (1,000 Ac. Ft.)

NO.	NAME	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL
7294	Applegate near Copper		165	April-Sept.	116 <sup>g</sup>	142
7420A	Clearwater above Trap Creek <sup>e</sup>		67	April-Sept.	64	105
8321	Fourmile Lake net inflow <sup>e</sup>		8.0	April-Sept.	7.0	114
8320	Hyatt Reservoir net inflow <sup>e</sup>		5.0	April-Sept.	6.0	83
712	Illinois River near Kerby <sup>e</sup>		182	April-Sept.	181	110
7230	Little Butte, North Fork below Fish Lake <sup>e</sup>		15.0	April-Sept.	14.9	100
722	Rogue above Prospect		335	April-Sept.	316	106
			280	April-July	265	106
7217	Rogue, Middle Fork near Prospect <sup>e</sup>		80	April-Sept.	74	108
			63	April-July	58	109
7282	Rogue, South Fork near Prospect <sup>e</sup>		81	April-Sept.	76	107
			70	April-July	65	108
7277	Rogue below South Fork		720	April-Sept.	680	106
			585	April-July	553	106
724	Rogue at Raygold near Central Point		960	April-Sept.	905	106
			800	April-July	760	105
7292	Rogue at Grants Pass		900	April-Sept.	852	106
7419	Umpqua, North Fork below Lake Creek <sup>e</sup>		170	April-Sept.	164	104

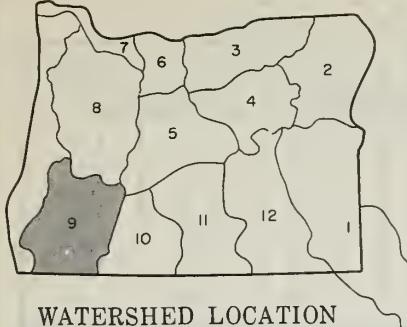
<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated. <sup>g</sup> 1938-'39 excepted. <sup>h</sup> Report delayed.

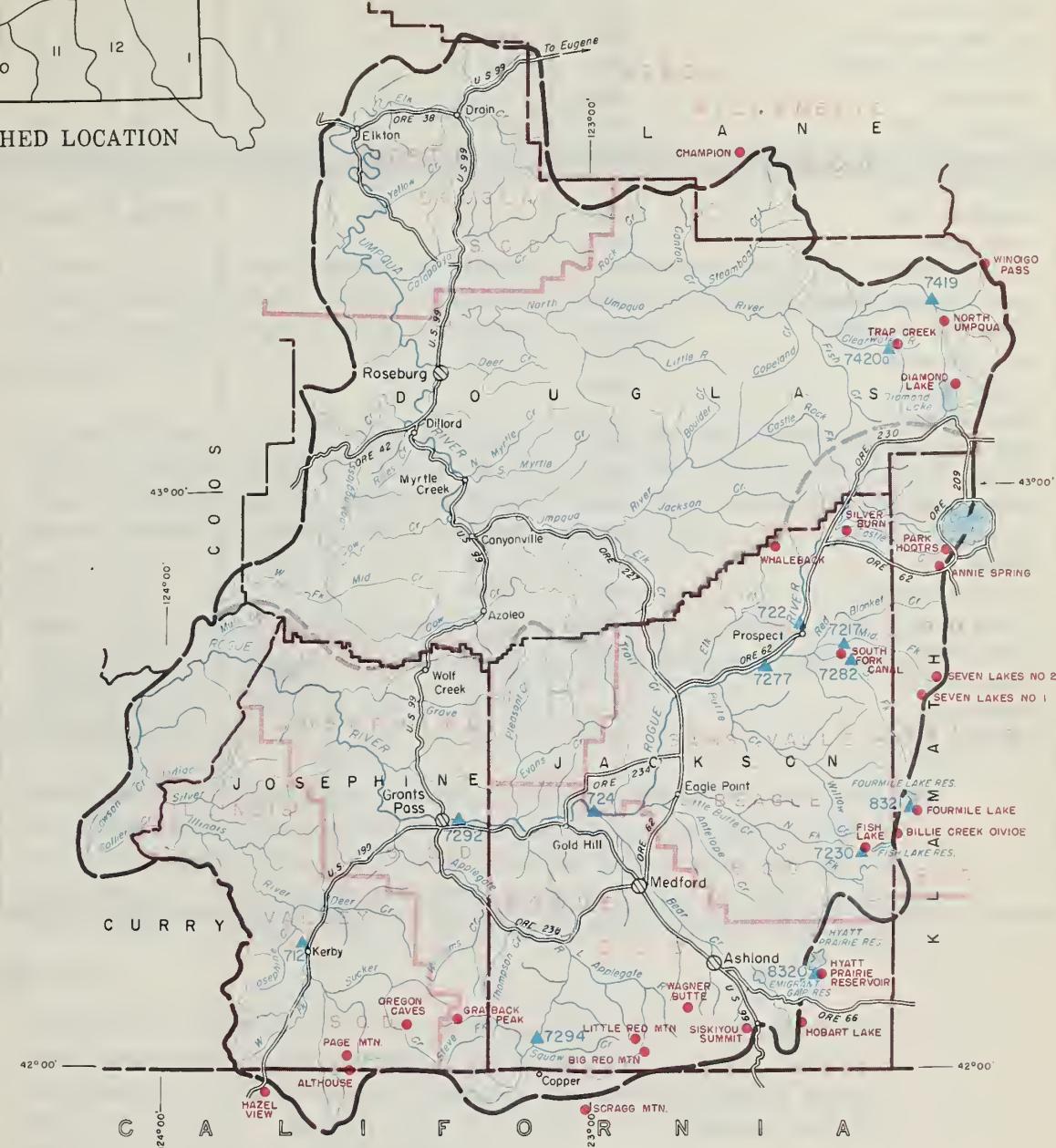
<sup>i</sup> Alternate course.

# ROGUE, UMPQUA WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



WATERSHED LOCATION



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S. C. D. Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course

## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL <sup>b</sup>
Emigrant Gap	8.3	7.7	8.3	8.0
Fish Lake	7.8	6.7	7.6	5.0
Fourmile Lake	16.1	11.2	16.6	7.5
Hyatt Prairie	16.1	13.6	16.6	6.7

## SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		YEARS OF RECORD
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	NORMAL <sup>b</sup>
Althouse	4530	3-25	14	3.2	0.0	6.8	15
Annie Spring	6018	3-26	137	54.0	42.3	47.4	15
Big Red Mountain	6500	3-26	104	42.1	23.5	28.6	15
Billie Creek Divide	5300	4-2	75	32.0	12.9	23.4	14
Champion	4500	3-28	59	27.9	16.9	27.9	14
Diamond Lake	5315	3-21	63	25.2	18.8	23.0	15
Fish Lake	4865	3-30	27	11.0	- -	11.7	14
Fauremile Lake	6000	4-2	102	41.0	21.6	- -	1
Grayback Peak	6000	3-29	95	35.9	19.2	25.4	15
Hazel View	2500	3-26	0	0.0	0.0	- -	0
Habart Lake	5010	3-24	2	T	8.1	6.3	5
Hyatt Prairie Reservoir	4900	3-24	18	7.2	- -	9.0	15
Little Red Mountain	6500	3-26	90	36.3	20.9	22.3	15
North Umpqua	4215	3-25	38	13.6	5.3	13.2	14
Oregon Caves	4000	h					
Page Mountain	4045	3-25	13	1.6	0.0	- -	0
Park Headquarters	6450	3-26	174	72.7	57.1	64.8	9
Scragg Mountain	6200	3-9	91	39.8	22.5	29.3	11
Seven Lakes No. 1	6800	3-23	168	80.4	65.9	51.2	16
Seven Lakes No. 2	6200	3-23	120	59.1	40.2	40.8	15
Silver Burn	3720	3-27	35	14.0	4.9	11.1	15
Siskiyou Summit <sup>i</sup>	4630	3-30	6	1.2	0.0	4.0	15
South Fork Canal	3500	4-1	0	0.0	0.0	1.6	15
Trap Creek	3800	4-1	0	0.0	0.0	11.4	12
Wagner Butte	6900	3-26	67	24.7	- -	16.9	15
Whaleback	5140	3-29	102	41.5	26.8	35.1	14
Windiga Pass	5800	3-27	128	55.8	40.8	55.3	5

# WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

*as of*

APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

## GENERAL OUTLOOK

Farmers of the Klamath Basin can expect abundant water supplies for the 1958 irrigation season. Reservoired water supplies are ample and future runoff from snow-melt will be much above average.

## SNOW-COVER

Water content of the mountain snow-pack is 128 percent of average and 147 percent of last year at this date. Recent storms have brought some snow to low-elevations which have been without snow most of the winter. Snow at the high elevations is very much above normal.

## SOIL-MOISTURE

Moisture in the soil-mantle on the upper watersheds under the snow has penetrated well beyond the usual depths. Wet soils favor a satisfactory runoff from snow-melt.

## RESERVOIR STORAGE

Water stored in Clear Lake, Gerber, and Upper Klamath Lake Reservoirs is 141 percent of average and will provide good carry-over storage for the next season. Inflow to Klamath Lake has been record high for the past 6 months and considerable water has been spilled to make room for later inflow. Smaller reservoirs and stock ponds are reported to be full.

## STREAMFLOW

Forecasts of streamflow for the irrigation season in Klamath Basin are much above the 15 year average. Inflow to Upper Klamath Lake is expected to be 138 percent of average. Streams contributing to the lake are also high - Sprague River is forecast at 134 percent average and the Williamson at 138 percent.

Inflow to Gerber and Clear Lake Reservoirs is expected to be 133 and 126 percent respectively.

*Report prepared by*

W. T. Frost and Manes Barton  
U. S. Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK <sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM OR AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Ft. Klamath Valley	Excellent	Average	
Lost River (Clear Lake)	Excellent	Average	
Lost River (Gerber)	Excellent	Average	
Lost River (Willow Reservoir)	Excellent	Average	
Sprague River	Excellent	Average	
Upper Klamath Lake	Excellent	Average	
Williamson River	Excellent	Average	

## STREAMFLOW FORECASTS <sup>a</sup> (1,000 Ac. Ft.)

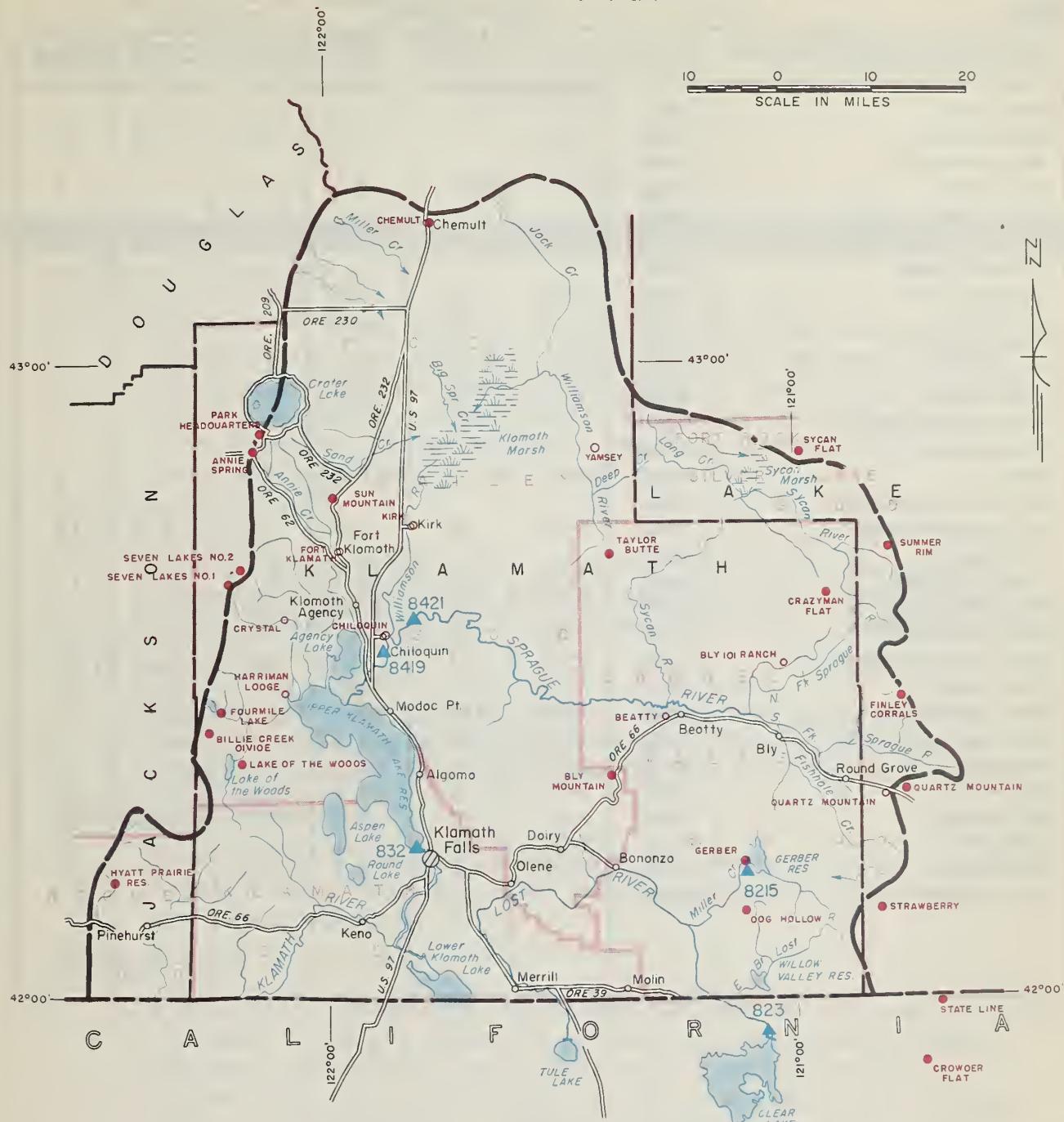
NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	
				FORECAST THIS YEAR	THIS YEAR AS PERCENT OF NORMAL
823	Clear Lake Reservoir net inflow <sup>g</sup>	62 d	April - Sept. March - July	49 86	126
8215	Gerber Reservoir net inflow <sup>g</sup>	32 d	April - Sept. March - July	24 42	133
8421	Sprague near Chiloquin	340	April - Sept.	253	134
832	Upper Klamath Lake net inflow <sup>g</sup>	725 585	April - Sept. April - July	526 424	138 138
8419	Williamson below Sprague River	560 470	April - Sept. April - July	406 340	138 138

## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL <sup>b</sup>
Clear Lake	440.2 <sup>h</sup>	414.1	396.0	236.6*
Gerber	94.0	86.6	87.3	47.6*
Upper Klamath Lake	584.0	529.6	524.3	448.2
*1938 excepted				

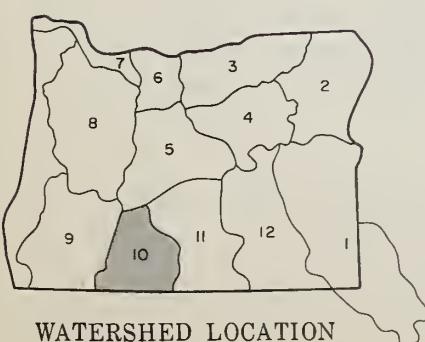
<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.  
<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated. <sup>g</sup> From COPCO or U.S.B.R. records of inflow. <sup>h</sup> Flashboards increase capacity to 513.0 <sup>i</sup> Report delayed.

# KLAMATH WATERSHEDS



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S.C.D. Boundary
- County Boundary
- Forecast Point
- Snow Course
- COPCO Snow Station



# Klamath Watersheds

## SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		YEARS OF <sup>c</sup> RECORD
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR	
Annie Spring	6018	3-26	137	54.0	42.3	47.4	15
Beatty (Copco)	4300	4-1	0	0.0	0.0	0.0	14
Billie Creek Divide	5300	i					
Bly Mountain	5090	3-28	22	8.6	0.0	--	1
Bly IOI Ranch (Copco)	4800	i					
Chemult	4760	3-27	29	11.0	2.9	9.6	14
Chiloquin (Copco)	4187	i					
Crazyman Flat <sup>f</sup>	6100	3-26	38	14.4	--	--	0
Crowder Flat <sup>f</sup>	5200	3-26	6	1.5	--	0.1	12
Crystal (Copco)	4200	i					
Dog Hollow <sup>f</sup>	4900	3-26	0	0.0	--	--	0
Finley Corrals <sup>f</sup>	6000	3-26	66	25.1	--	--	0
Fort Klamath (Copco)	4150	i					
Fourmile Lake	6000	i					
Gerber	4850	3-31	2	0.5	0.0	--	2
Harriman Lodge (Copco)	4200	i					
Hyatt Prairie Reservoir	4900	3-24	18	7.2	--	9.0	15
Kirk (Copco)	4533	i					
Lake of the Woods	4960	3-30	39	13.2	5.5	9.9	15
Park Headquarters	6450	3-26	174	72.7	57.1	64.8	9
Quartz Mountain	5320	3-28	18	7.7	0.0	4.7	15
Quartz Mountain (Copco)	5504	3-28	23	9.2	0.0	5.1	14
Seven Lakes No. 1	6800	3-23	168	80.4	65.9	51.2	16
Seven Lakes No. 2	6200	3-23	120	59.1	40.2	40.8	15
State Line <sup>f</sup>	5750	3-26	36	13.7	--	--	0
Strawberry <sup>f</sup>	5600	3-26	10	3.3	4.7	6.7	12
Summer Rim	7200	3-22	63	23.2	18.8	17.9	14
Sun Mountain	5350	3-28	87	38.1	23.7	28.3	15
Sycan Flat <sup>f</sup>	5500	3-26	22	8.4	--	--	0
Taylor Butte	5100	3-31	11	3.7	0.0	3.9	15
Yamsey (Copco)	4600	i					

# WATER SUPPLY OUTLOOK

## LAKE COUNTY, GOOSE LAKE WATERSHEDS

### OREGON

*as of*

APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

#### GENERAL OUTLOOK

Farmers in Lake County can expect to have adequate water supplies for the 1958 irrigation season. Recent storms have continued to increase the ample "snow crop" reported in this bulletin. Excellent soil-moisture conditions are expected to counter balance the lack of low-elevation snow in the Silver Lake - Fort Rock area.

#### SNOW-COVER

Analysis of current snow surveys and aerial snow depth observations indicates water content of the present snow-cover is 136 percent of average and double that of last year.

#### SOIL-MOISTURE

Moisture in the mountain soils under the snow-pack is considerably greater than average. This will favor an adequate runoff from the snow-melt.

#### RESERVOIR STORAGE

Drew's Creek and Cottonwood Creek Reservoirs are practically full. Stock ponds and other small reservoirs are reported to be full.

#### STREAMFLOW

Forecasts of streamflow in Lake County are all well above average. Drew's Creek is expected to discharge about 103 percent of average in the next four months. The Chewaucan River is forecast to flow 123 percent average April through June. Warner Valley streams will flow between 114 and 119 percent of average. It is expected that water levels of Silver Lake, Summer Lake, Abert Lake, and Bluejoint Lake will set new records for rise again this year.

*Report prepared by:*

W. T. Frost and Marnes Barton  
U. S. Department of Agriculture, Soil Conservation Service  
209 S W Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK<sup>a</sup>

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Chewaucan River	Excellent	Average	
Craaked Creek	Average	Average	
Deep Creek	Excellent	Average	
Dry Creek	Average	Average	
East Side Goose Lake	Excellent	Average	
Guano Lake	Average	Average	
Haney Creek	Excellent	Average	
Lakeview Water Users Association	Excellent	Average	
Rack Creek	Average	Average	
Silver-Buck Creeks	Average	Average	
Summer Lake	Excellent	Average	
Thamas Creek	Excellent	Average	
Twentymile Creek	Excellent	Average	
Warner Lakes	Excellent	Average	

## STREAMFLOW FORECASTS<sup>a</sup> (1,000 Ac. Ft.)

NO.	NAME	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>	THIS YEAR AS PERCENT OF NORMAL
						THIS YEAR AS PERCENT OF NORMAL
924	Chewaucan near Paisley		90	April - June	73	123
9127	Deep above Adel		80	April - June	67	119
814	Drew Reservoir net inflow		31	April - July	30 <sup>g</sup>	103
			d	March - July	44 <sup>g</sup>	
9114	Haney near Plush		18.5	April - June	15.6 <sup>h</sup>	119
916	Twentymile near Adel		24	April - June	21 <sup>i</sup>	114

## SNOW

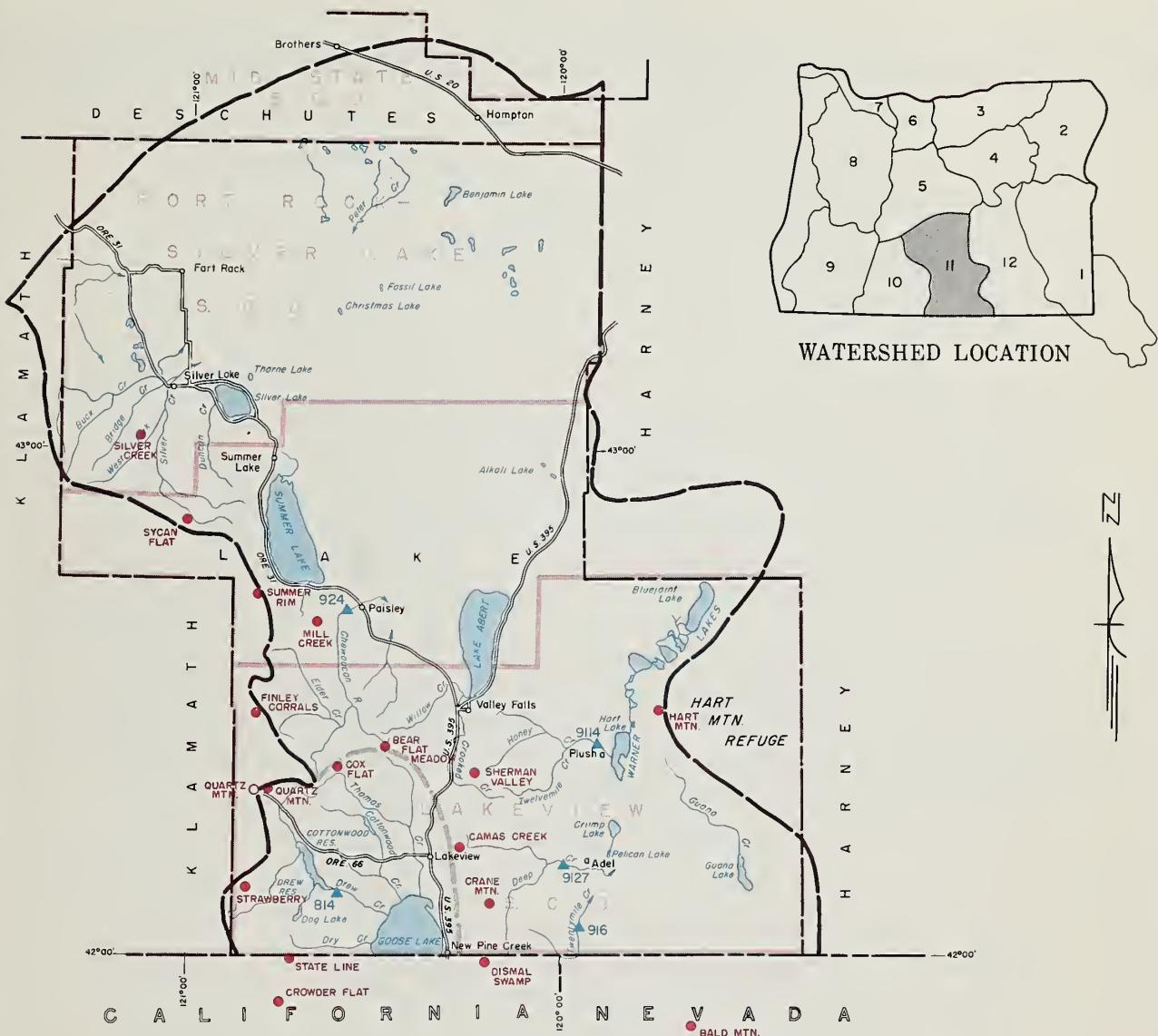
SNOW COURSE	CURRENT INFORMATION				PAST RECORD		YEARS OF RECORD <sup>c</sup>
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
						LAST YEAR	
Bald Mountain	6720	j					
Bear Flat Meadow <sup>f</sup>	5900	3-26	44	16.7	- -	- -	0
Camas Creek	5720	3-27	40	15.0	6.4	10.9	14
Cax Flat <sup>f</sup>	5750	3-26	28	10.6	- -	- -	0
Crane Mountain <sup>f</sup>	6020	3-26	24	9.1	- -	- -	0
Crawder Flat <sup>f</sup>	5200	3-26	6	1.5	- -	0.1	12
Dismal Swamp <sup>f</sup> (Calif.)	7000	3-26	96	36.5	- -	- -	0
Finley Carrals <sup>f</sup>	6000	3-26	66	25.1	- -	- -	0
Hart Mountain <sup>f</sup>	6350	3-26	4	1.5	- -	- -	0
Mill Creek	6200	3-23	30	11.3	5.0	6.9	14
Quartz Mountain (COPCO)	5504	3-28	23	9.2	0.0	5.1	14
Quartz Mountain	5320	3-28	18	7.7	0.0	4.7	15
Sherman Valley <sup>f</sup>	6600	3-26	48	18.2	- -	- -	0
Silver Creek	4900	j					
State Line <sup>f</sup>	5750	3-26	36	13.7	- -	- -	0
Strawberry <sup>f</sup>	5600	3-26	10	3.3	4.7	6.7	12
Summer Rim	7200	3-22	63	23.2	18.8	17.9	14
Sycan Flat <sup>f</sup>	5500	3-26	22	8.4	- -	- -	0

<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated. <sup>g</sup> 1942, '43 and '45 excepted <sup>h</sup> 1942 excepted <sup>i</sup> 1938-'40 excepted. <sup>j</sup> Report delayed.

# LAKE COUNTY, GOOSE LAKE WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



WATERSHED LOCATION

## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL b
Cottonwood	4.1	2.1	3.9	1.4*
Drew	62.5	62.1	63.9	48.8
*1942 excepted				

## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- S. C. D. Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- COPCO Snow Station



# WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

*as of*  
APRIL 1, 1958

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

## GENERAL OUTLOOK

Farmers irrigating Harney Basin lands can expect adequate water supplies for the 1958 season. Flow of the larger streams, the Blitzen and the Silvies, will be well above normal. Late season flow of the smaller streams will be close to normal but is considerably dependent upon satisfactory summer rains.

## SNOW-COVER

Water content of the mountain snow-cover is 134 percent average and 147 percent of last year. Lack of snow in the lower hills may reduce late season flows on smaller streams but the extra moisture already absorbed by these watersheds will tend to counter balance this lack.

## SOIL-MOISTURE

Water content of the soil-mantle throughout the basin is excellent. Measurements taken two weeks ago at key stations showed moisture penetration beyond the 4th foot in deep soil profiles. These wet soils will favor adequate snow-melt runoff and will continue to contribute to the ground-water supply for some time.

## STREAMFLOW

Flow of the Silvies River during the April-September period is forecast at 116 percent of average. Silver Creek can be expected to produce more than average water supplies in the early season. The Blitzen is forecast to discharge 130 percent of average for the spring and summer. Trout Creek near Denio is expected to discharge well above the 15 year normal. Catlow Valley should have satisfactory water for all usual irrigation.

Report prepared by:

W. T. Frost and Myles Barton  
U. S. Department of Agriculture, Soil Conservation Service  
209 S. W. Fifth Avenue, Portland, Oregon

# WATER SUPPLY OUTLOOK

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Catlow Valley	Excellent	Average	
Cow Creek	Average	Average	
Donner und Blitzen River	Excellent	Average	
Mill - Coffeepot Creeks	Average	Average	
Rattlesnake Creek	Average	Average	
Silver Creek	Excellent	Average	
Silvies River	Excellent	Average	
Soldier - Prather Creek	Average	Average	
Trout Creek	Excellent	Average	
Whitehorse Creek	Excellent	Average	

## STREAMFLOW FORECASTS <sup>a</sup> (1,000 Ac. Ft.)

NO.	NAME	FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL <sup>b</sup>		THIS YEAR AS PERCENT OF NORMAL
					FORECAST	PERIOD	
953	Donner und Blitzen near Frenchglen		86	April - Sept.	66		130
966	Silvies near Burns		118	April - Sept.	102		116
974	Trout near Denio		13	April - Sept.	9.6		135

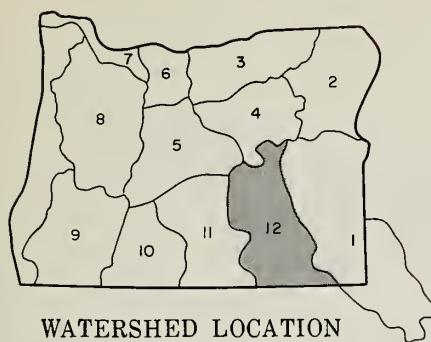
## SNOW

SNOW COURSE	CURRENT INFORMATION			PAST RECORD			YEARS OF <sup>c</sup> RECORD
	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
						LAST YEAR	
Blue Mountain Springs	5900	3-25	59	21.2	16.2	15.8	15
Delintment Lake	5600	3-26	28	10.1	7.7	- -	4
Disaster Peak	6500	3-31	36	18.3	9.6	- -	4
Emigrant Butte	5000	3-26	12	4.3	0.8	- -	0
Fish Creek	7900	8					
Hart Mountain <sup>f</sup>	6350	3-26	4	1.5	- -	- -	0
Idlewild Camp	5200	3-24	17	6.6	2.4	4.6	15
Izee Summit	5293	3-27	33	12.4	8.4	7.5	15
Lake Creek	5120	3-26	41	15.3	11.2	10.1	15
Rock Spring	5100	3-24	24	9.0	4.3	4.7	15
Silvies	6900	3-28	43	17.5	14.0	14.6	14
Snow Mountain	6300	3-26	47	17.1	14.5	15.1	9
Starr Ridge	5150	3-27	18	6.2	4.8	4.7	15
Stinking Water	4800	3-31	T	T	0.0	1.2	13

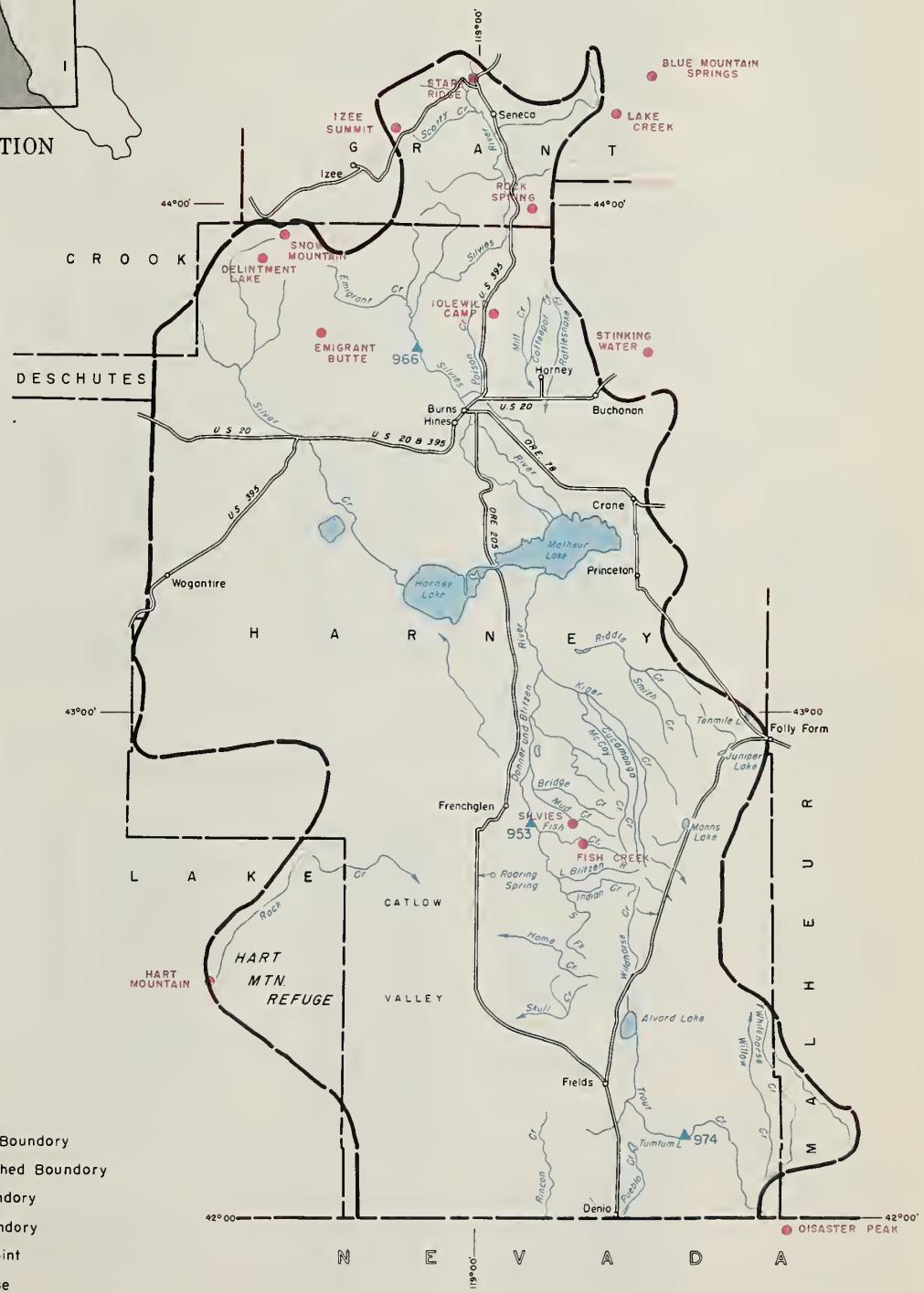
<sup>a</sup> Assuming normal meteorological conditions. <sup>b</sup> 1938-'52, 15 year period. <sup>c</sup> Number of years in 1938-'52 period. <sup>d</sup> Not scheduled.

<sup>e</sup> Corrected to natural flow. <sup>f</sup> Aerial snow depth gage; water content estimated. <sup>g</sup> Not surveyed

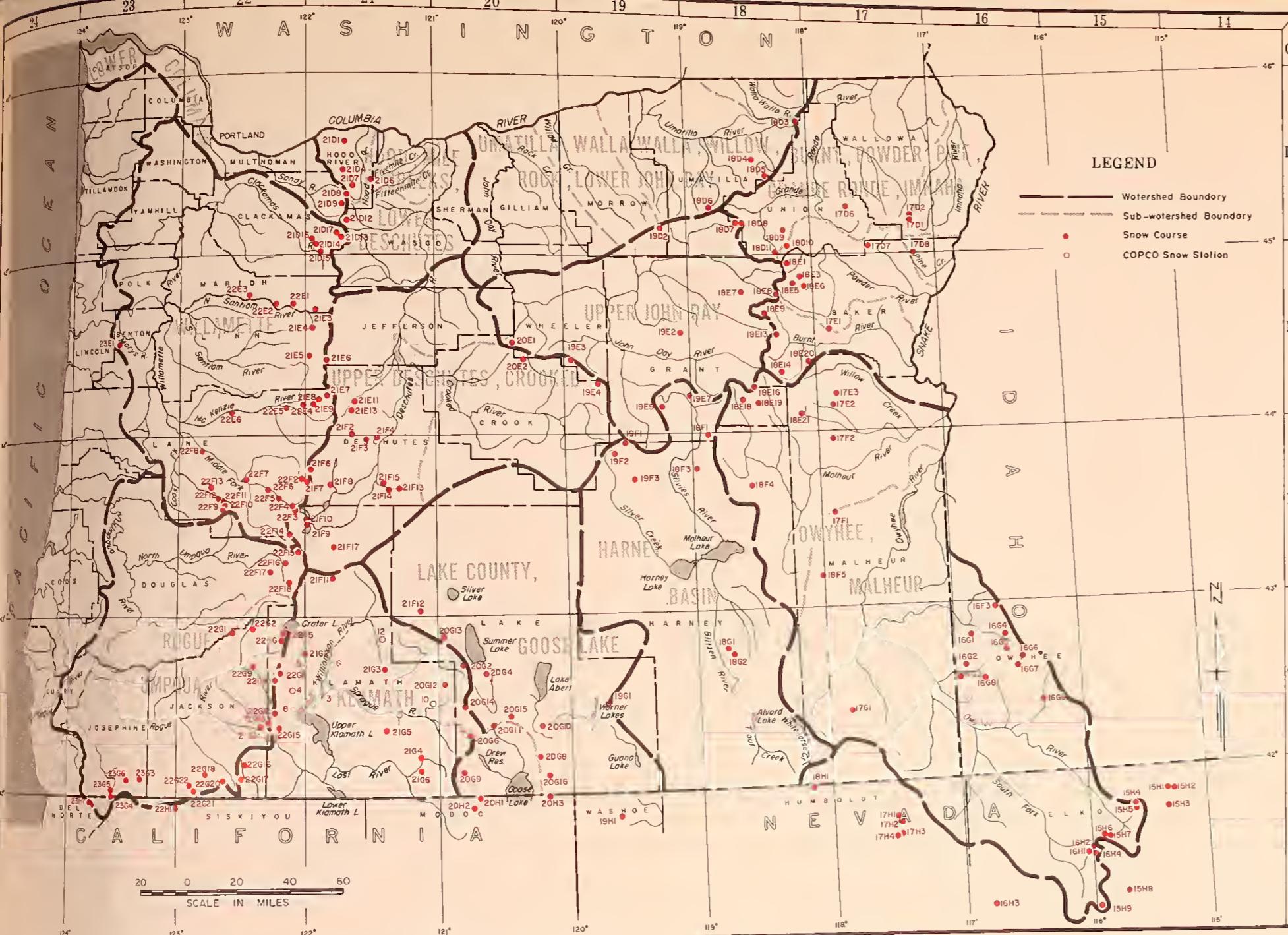
# HARNEY BASIN WATERSHEDS



### WATERSHED LOCATION







# MAP and INDEX to OREGON SNOW COURSES

Watershed	Location	Sec	Twp	Rge	Elev	Number	Name	Location	Sec	Twp	Rge	Elev	Number	Name	Location	Sec	Twp	Rge	Elev	Number	Name	Location	Sec	Twp	Rge	Elev				
<b>WYTHE, MALHEUR WATERSHEDS (1)</b>																														
<b>WYTHE, MALHEUR WATERSHEDS (1)</b>																														
<b>WYTHE RIVER</b>																														
WYTHE RIVER		1668	*Nickel Sheep Camp (Ida)	23	10S	4W	5450		17D1	Aneroid Lake No. 1	16	4S	45E	7480		21D12	Clear Lake	29	4S	9E	3500		21D8	*Crowder Flat (Cal)	30	47N	11S	5200		
Barlow Ridge	(Ida)	32	8S	1W	5900	15H6	Rodeo Flat (Nev)	36	43N	53E	6800	18E1	Anthony Lake	18	7S	37E	7125	21D13	Big Bottom	25	6S	7E	2118	21C6	*Dog Hollow (Cal)	1	40S	14E	4900	
Barlow Valley	(Ida)	26	27S	38E	4200	15H3	76 Creek (Nev)	6	44N	58E	7100	18E1	Anthony Lake	18	7S	37E	5340	21D14	Clackamas Lake	35	5S	8E	3400	20G14	*Finley Corrals (Cal)	11	36S	10E	6000	
Battle Creek	(Ida)	10	11S	1E	5700	16F3	Silver City (Ida)	6	55	3W	6600	18E1	Barney Creek	16	14S	36E	5950	21D15	Clear Lake	29	4S	9E	3500	22G12	Fournile Lake (Cal)	9	36S	13E	6000	
Bear Creek	(Ida)	25	45N	58E	7800	18C1	Silvies (Ida)	35	32S	32E	6900	18E1	Beaver Reservoir	8	5S	37E	5340	21D16	Lake Harriet	4	6S	7E	2045	21G4	Gerber (Cal)	12	39S	13E	4850	
Bear Creek	(Nev)	30	45N	56E	6700	16G1	South Mountain No. 2 (Ida)	35	75	7W	6340	18E1	Blue Mountain	32	11S	40E	5430	21D17	Feavine Ridge	14	15	6S	7E	3500	22G15	Lake of the Woods (Cal)	15	39S	38E	4900
Bear Creek, Lower	(Nev)	25	45N	56E	6700	16G2	Taylor Canyon (Nev)	35	39N	53E	6200	18E1	Blue Mountain Spring	21	15S	35E	5900	21D18	Hyatt Prairie Reservoir	1	11S	5E	3800	22G16	Lakes of the Woods (Cal)	15	39S	38E	4900	
Bear Creek, Upper	(Nev)	11	45N	39E	7200	16G3	Tremewian Ranch (Nev)	9	39N	55E	5700	18E1	Blue Mountain Summit	6	12S	36E	5098	21D19	Lake Park	8	31S	6E	6150	22G17	Park Headquarters (Cal)	8	31S	6E	6150	
Bear Creek, Upper	(Nev)	18	9S	56E	5200	16G4	Triangle (Ida)	25	7S	3W	5150	18E1	Blue Mountain Summit	12	27S	8E	5970	21D20	Quartz Mountain	2066				20G26	Quartz Mountain (Cal)	2	38S	16E	5320	
Bear Creek, Upper	(Nev)	8	47N	34E	6500	16H3					18E1	Blue Mountain Summit	18	9S	36E	5098	21D21	Seven Lakes No. 1	3	31S	6E	5320	20G27	Seven Lakes No. 1 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	33	6N	58E	7900	16H4					18E1	Blue Mountain Summit	24	25	15S	40E	5430	21D22	Seven Lakes No. 2	2	31S	6E	5320	20G28	Seven Lakes No. 2 (Cal)	26	33S	5E	6800	
Bear Creek, Upper	(Nev)	31	43N	54E	6700	16H5					18E1	Blue Mountain Summit	30	11S	40E	5430	21D23	Seven Lakes No. 3	1	31S	6E	5320	20G29	Seven Lakes No. 3 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H6					18E1	Blue Mountain Spring	32	11S	40E	5430	21D24	Seven Lakes No. 4	0	31S	6E	5320	20G30	Seven Lakes No. 4 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H7					18E1	Blue Mountain Spring	32	11S	40E	5430	21D25	Seven Lakes No. 5	1	31S	6E	5320	20G31	Seven Lakes No. 5 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H8					18E1	Blue Mountain Spring	32	11S	40E	5430	21D26	Seven Lakes No. 6	2	31S	6E	5320	20G32	Seven Lakes No. 6 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H9					18E1	Blue Mountain Spring	32	11S	40E	5430	21D27	Seven Lakes No. 7	3	31S	6E	5320	20G33	Seven Lakes No. 7 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H10					18E1	Blue Mountain Spring	32	11S	40E	5430	21D28	Seven Lakes No. 8	4	31S	6E	5320	20G34	Seven Lakes No. 8 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H11					18E1	Blue Mountain Spring	32	11S	40E	5430	21D29	Seven Lakes No. 9	5	31S	6E	5320	20G35	Seven Lakes No. 9 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H12					18E1	Blue Mountain Spring	32	11S	40E	5430	21D30	Seven Lakes No. 10	6	31S	6E	5320	20G36	Seven Lakes No. 10 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H13					18E1	Blue Mountain Spring	32	11S	40E	5430	21D31	Seven Lakes No. 11	7	31S	6E	5320	20G37	Seven Lakes No. 11 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H14					18E1	Blue Mountain Spring	32	11S	40E	5430	21D32	Seven Lakes No. 12	8	31S	6E	5320	20G38	Seven Lakes No. 12 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H15					18E1	Blue Mountain Spring	32	11S	40E	5430	21D33	Seven Lakes No. 13	9	31S	6E	5320	20G39	Seven Lakes No. 13 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H16					18E1	Blue Mountain Spring	32	11S	40E	5430	21D34	Seven Lakes No. 14	10	31S	6E	5320	20G40	Seven Lakes No. 14 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H17					18E1	Blue Mountain Spring	32	11S	40E	5430	21D35	Seven Lakes No. 15	11	31S	6E	5320	20G41	Seven Lakes No. 15 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H18					18E1	Blue Mountain Spring	32	11S	40E	5430	21D36	Seven Lakes No. 16	12	31S	6E	5320	20G42	Seven Lakes No. 16 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H19					18E1	Blue Mountain Spring	32	11S	40E	5430	21D37	Seven Lakes No. 17	13	31S	6E	5320	20G43	Seven Lakes No. 17 (Cal)	26	33S	5E	6800		
Bear Creek, Upper	(Nev)	31	45N	56E	6600	16H20					18E1	Blue Mountain Spring	32	11S																



The following organizations cooperate in the Oregon Snow Survey work:

STATE

Idaho Cooperative Snow Surveys  
Nevada Cooperative Snow Surveys  
Oregon Agricultural Experiment Station  
Oregon State Engineer and Corps of State Watermasters  
Oregon State Highway Engineers  
Soil Conservation Districts of Oregon

FEDERAL

Department of Agriculture  
Cooperative Extension Service  
Forest Service  
Soil Conservation Service  
Department of Commerce  
Weather Bureau  
Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
Indian Service  
National Park Service  
Department of National Defense  
Corps of Army Engineers

PUBLIC UTILITIES

California-Pacific Utilities Company  
Pacific Power and Light Company  
Portland General Electric Company  
The California Oregon Power Company

MUNICIPALITIES

City of Baker  
City of La Grande  
City of The Dalles  
City of Walla Walla

IRRIGATION DISTRICTS

Associated Ditch Companies  
Central Oregon Irrigation District  
Deschutes County Municipal Improvement District  
East Fork Irrigation District  
Grants Pass Irrigation District  
Jordan Valley Irrigation District  
Lakeview Water Users, Incorporated  
Medford Irrigation District  
North Board of Control - Owyhee Project  
North Unit Irrigation District  
Ochoco Irrigation District  
Rogue River Valley Irrigation District  
South Board of Control - Owyhee Project  
Talent Irrigation District  
Vale-Oregon Irrigation District  
Warmsprings Irrigation District

PRIVATE ORGANIZATIONS

Amalgamated Sugar Company  
The Crag Rats, Hood River, Oregon

